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THE AMERICAN ELEVATOR AND GRAIN TRADE



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PUBLISHED BY Mitchell Brothers Publishing Co. } A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS. { One Dollar Per Annum SINGLE COPIES, 15 CENTS

VOL. XXXIX. 431 South Dearborn Street, Chicago, Ill., February 15, 1921 NO. 8

WE ARE PROGRESSIVE ENOUGH
TO BE AGGRESSIVE FOR YOU

McKENNA & DICKEY
Grain

60 BOARD OF TRADE

For your
Business Sake
Communicate

HARRIS, WINTHROP & CO.

52 Broadway, New York

The Rookery, Chicago

GRAIN—STOCKS—BONDS

MEMBERS

New York Stock Exchange New York Cotton Exchange
New York Produce Exchange Chicago Stock Exchange
New York Coffee Exchange Chicago Board of Trade
Winnipeg Grain Exchange Kansas City Board of Trade
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Buyers

OF

Clover

AND

**Timothy
Seed**

Mail Samples for Top Market Bids

**Milwaukee
Seed Company**

MILWAUKEE, WIS.

Established 1877

LANGENBERG BROS. GRAIN CO.
GRAIN and HAY

We Solicit Your Consignments

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Kansas City

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THE ILLINOIS SEED CO.
GRASS SEEDS FIELD

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CHICAGO

SELLERS

Ask for Samples

Mail Samples for Bid.

TIMOTHY, CLOVERS, ALSIKE, ALFALFA, MILLETS, RED-
TOP, BLUEGRASS, SEED GRAIN, GRAIN BAGS, Etc.

A. E. Schulz

Mechanical Engineer

PNEUMATIC GRAIN CONVEYORS
PNEUMATIC BOAT UNLOADERS
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PNEUMATIC CAR LOADERS

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The WAGNER

Covers all markets. Ask for the weekly or
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Stocks E. W. Wagner & Co. Bonds
Grain Members New York Stock Exchange
Members New York Cotton Exchange
Members Chicago Board of Trade
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LETTER

Established 33 Years

CHICAGO

COURTEEN SEED CO.

Specialize in all

GRASS AND FIELD SEEDS

SHIPPERS. Send Samples for Bid.
BUYERS. Ask for samples and prices.

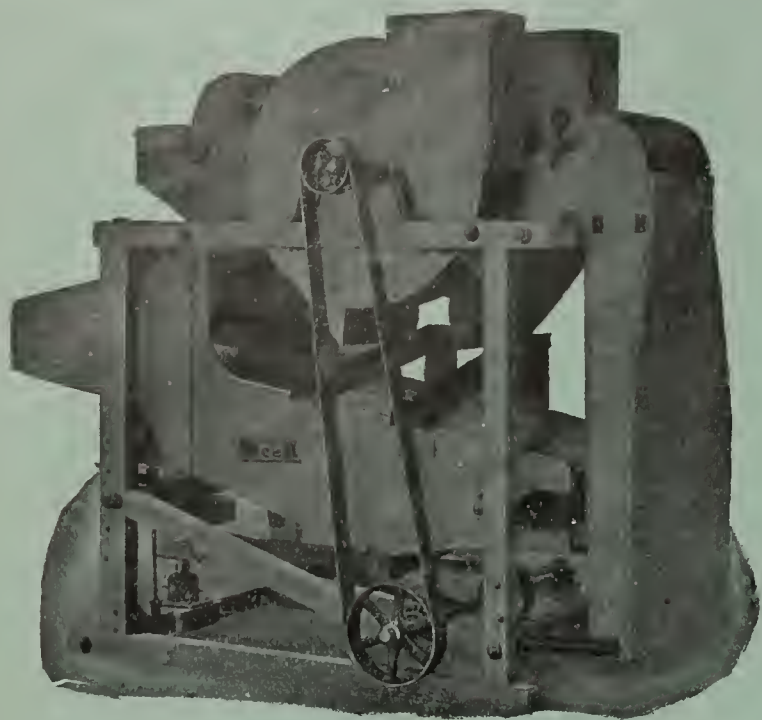
MILWAUKEE, WISCONSIN

BACHE SERVICE

USE IT
ON

GRAIN AND SEEDS

Chicago, Ill.



Built in ten sizes

Beall

THE MARK OF QUALITY

The gateway to successful grain elevator business lies through

Beall Warehouse and Elevator Separators

Let us interest you in the unusual merits of these machines today. Write for particulars.

THE BEALL IMPROVEMENTS CO., Inc.

Decatur

Illinois



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THE CURTIS HOTEL

Tenth St., 3rd to 4th Aves., MINNEAPOLIS, U. S. A.
Six Blocks From the Chamber of Commerce.

Every Room an Outside Room. Every Room with Private Bath.

This Hotel Caters to the Grain and Milling Trade—Especially Suited to Conventions

Average rate for room and bath—\$2.50 single—\$3.50 double.

Entertaining programs are rendered daily during luncheon and dinner hour on the great pipe organ in main restaurant by Dr. Frederic Tristram Egner. Orchestra music daily during dinner hour.

One whole city block of beautiful lobbies, ball rooms, billiard rooms, chocolate shop, beauty shop, barber shop, tailor shop, physical culture and bath department, cigar and news stands, delicatessen shop, etc., are operated in this hotel for the convenience and entertainment of our guests.

Sheet Metal & Conveyor Co.

2444 W. 20th St.

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Elevator Casings	Steel Stacks and Flues
Grain Spouts	Light Structural
Conveyor Boxes	Steel Work
Elevator Buckets	Ash Chutes
Steel Tanks	Coal Chutes
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We are now in position to fill promptly all orders for the

CLIMAX SCOOP TRUCK

which will be glad news for many waiting customers. The Scoop-Truck enables one man to remove more coal or grain from a box car than three men can move in the ordinary way. Ask any of the 5,000 users who have tried it.

	Price
Standard - - -	\$15.00
Extra Heavy - - -	17.00
F. O. B. Factory	

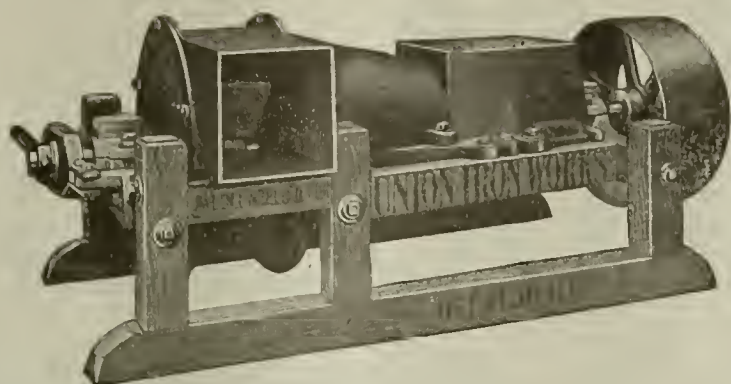
DETROIT SCOOP-TRUCK COMPANY

993 Osborne Place

DETROIT, MICH.



We Are Specialists



"Western" Pitless Sheller

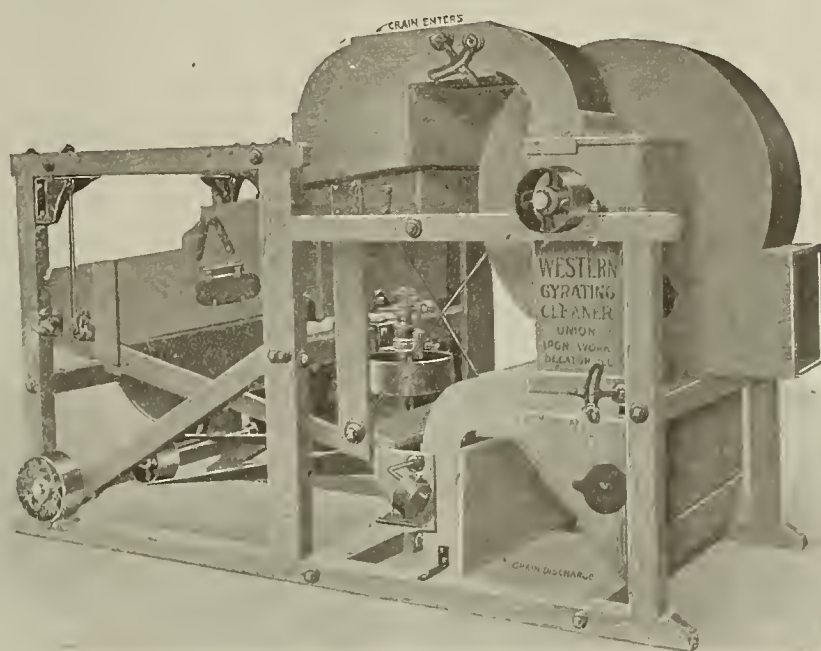
in those things that make the grain elevator business profitable from an operating standpoint. The elevator owner often loses sight of the importance of installing the right machinery equipment. This is equally important with capital

and knowledge of the business. Therefore, investigate the WESTERN LINE before buying the outfit for your new elevator or repairs for the old. We will gladly mail you our late catalog which contains

Everything Needed for the Grain Elevator from Basement to Cupola

THE LINE INCLUDES

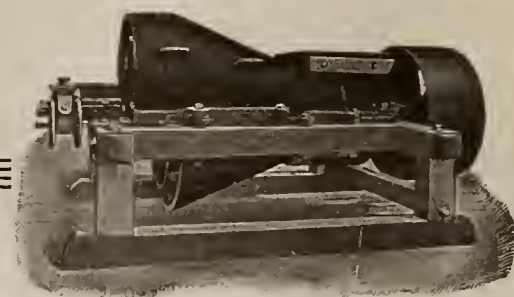
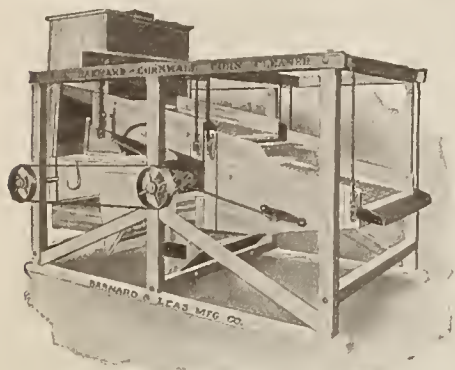
Shellers	Conveyors
Cleaners	Manlifts
Car Loaders	Link Belting
Buckets	Pulleys
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Elevator Heads	Clutches
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"Western" Gyrating Cleaner

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Complete Line of Shellers and Cleaners Kept at
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PRICES REDUCED
25% TO 50%

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**MILL BUILDERS AND
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MORSE CHAIN DRIVES

The Sign of Durability

Positive as Gears

Flexible as a Belt

Longer Life

Morse frictionless "Rocker Joint" silent chains and sprockets.



High speed, positive, flexible drives for large or small power transmission.

99 Per Cent Efficiency
Guide Links Hold Alignments.

All so-called "silent chains" are to all appearances very much alike. Each consists of a steel belt of flat steel links, so shaped that when set on edge and assembled in numbers

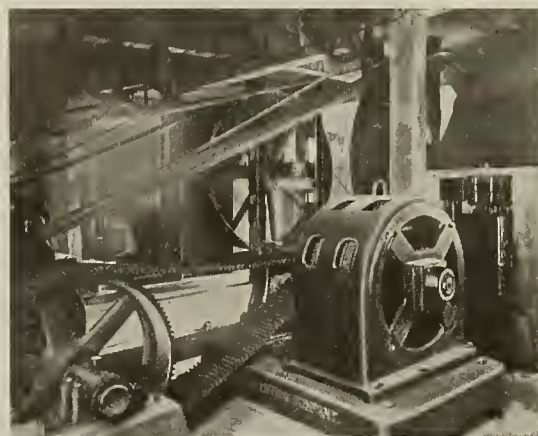
to give a desired length of chain, rows of teeth are formed on one side to engage the teeth on the sprockets.

Morse chains differ in that unseen but all important part, the joint. On it rests the burden of service in any chain. The Morse is constructed with this in view.

Our bulletins give detailed description of chain and joint construction—also valuable chain and sprocket engineering data. Sent free upon request.



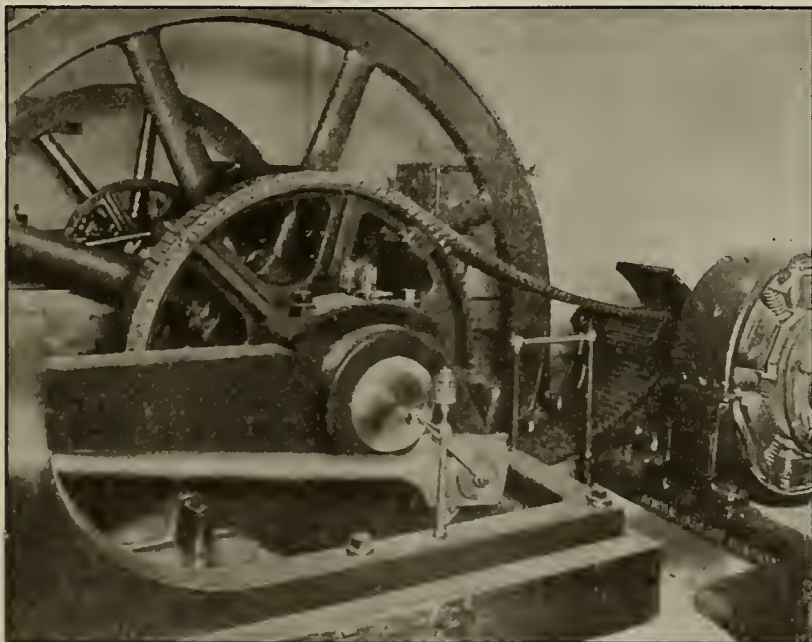
Morse Drives on Elevator Legs



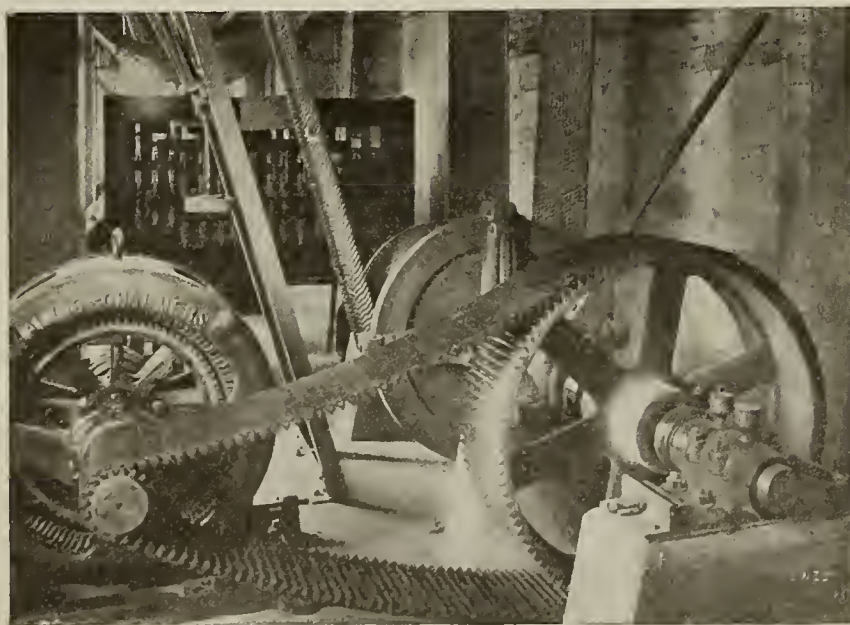
Drive in C. & N. W. Elevator at Milwaukee

Engineering Service

Our corps of engineers with years of experience in installing chain drives, will assist you in solving your transmission problems. It will entail no obligation on your part. Get in touch with them now.



200-Horsepower Elevator Drive



100-Horsepower Drive in Soo Line Terminal Elevator

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Largest manufacturers of
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"MORSE" IS THE GUARANTEE ALWAYS BEHIND THE EFFICIENCY, DURABILITY AND SERVICE

CINCINNATI

THE GATEWAY TO THE SOUTH AND EAST

Has the "square deal" plugging system for hay.

Has reconsignment and transit privileges and other favorable points which insures most successful handling of grain or hay shipments.



Home of the Cincinnati Grain and Hay Exchange

Is the terminal point for 200,000 miles of railways and therefore a convenient shipping point for the country dealer, and local buyers are enabled to distribute all products quickly and to best advantage. Has weighing and inspection service second to none and up-to-date grain and hay merchants constantly safeguarding their patrons' interests.

Those are just a few of the reasons why you should ship your Grain and Hay to Cincinnati. Ship to any of the following responsible grain and hay firms, all members of the

Cincinnati Grain & Hay Exchange

A. BENDER, Flour, Grain and Feeds
BINGHAM-SCHOLL GRAIN CO., Grain Exclusively
BROUSE-SKIDMORE GRAIN CO., Grain, Hay, Feed
BLUMENTHAL, MAX, Grain, Hay, Feed
COSTELLO GRAIN & HAY CO., THE JOSEPH F., Hay and Grain
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CURRUS GRAIN CO., Grain and Hay
DE MOLET GRAIN CO., Grain and Hay
EARLY & DANIEL CO., Hay, Grain, Feed
FITZGERALD BROS. CO., Grain and Hay
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DAN B. GRANGER & CO., Hay and Grain
MUTUAL COMMISSION COMPANY, Strictly Commission
THE NUTRITIA COMPANY, Feeds



Trade Mark of Quality

MODERN GRAIN ELEVATOR EQUIPMENT

ENDURANCE IS THE TEST OF QUALITY
WELLER-MADE EQUIPMENT STANDS THE TEST



WRAY FLEXIBLE SPOUTS (PATENTED)

DUST PROOF,
QUICK DISCHARGE
Grain will run on less incline

DOUBLE LIFE
Wear is on both sides of spout

LEVER EFFECT
Has revolving joint

LABOR SAVER
One man can change from place to place

Saves in height of building



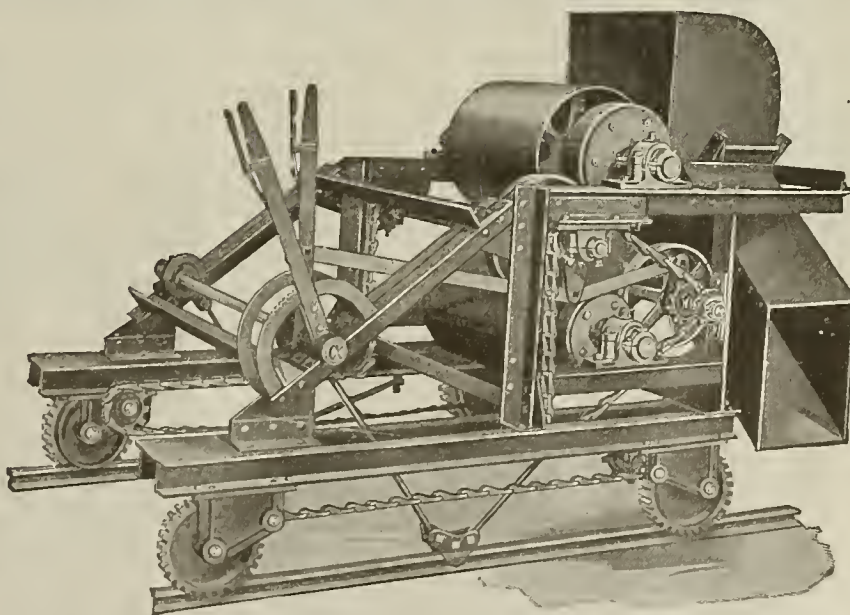
CALL ON US FOR
BELT CONVEYORS
DRAG CONVEYORS
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RIBBON CONVEYORS
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ELEVATOR BOOTS
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EQUIPMENT

WELLER HEAVY DUTY SELF PROPELLING TRIPPERS (PATENTED)

Embodies Features Not Found in Any Other—Fully Protected by Patents

Weller Trippers are doing duty in most of the large elevators.

Large pulleys help to add to the life of the belt, while the wide clearance on each side of the belt and the double friction is so arranged that it is practically impossible for the belt to catch in the friction.



WELLER MFG. CO.
CHICAGO

NEW YORK
BOSTON

BALTIMORE
PITTSBURGH

SAN FRANCISCO
SALT LAKE CITY



The dynamic character of the Indianapolis market reaches to all receiving centers, making it the logical shipping point from central territory.

It attracts grain from the vast central arable plains and has proper connections with excellent billing facilities to all points, East, West, North, South.

The location and natural advantages of Indianapolis as a grain receiving and shipping center, therefore, makes it the best market in the country.

Ship your grain and hay to any of the following firms, all members of the

INDIANAPOLIS BOARD OF TRADE

BIG FOUR ELEVATOR CO., Merchandisers of Grain
 BINGHAM-HEWETT-SCHOLL CO., Grain Merchants
 BELT ELEVATOR & FEED CO., Grain Commission
 BERT A. BOYD GRAIN CO., Grain Commission
 CLEVELAND GRAIN & MILLING CO., Grain Commission
 THE EARLY & DANIEL CO., Grain Commission Merchants and Buyers
 WM. R. EVANS GRAIN CO., Brokers and Commission
 P. M. GALE GRAIN CO., Grain, Feed
 HEINMILLER GRAIN CO., Receivers and Shippers
 HAYWARD-RICH GRAIN CO., Commission, Brokerage

LEW HILL GRAIN CO., Strictly Commission
 H. E. KINNEY GRAIN CO., Receivers and Shippers
 LAMSON BROS. & CO., Grain, Seeds
 McCARDLE-BLACK CO., Grain Merchants
 CARL D. MENZIE GRAIN & BROKERAGE CO., Brokers and Grain Commission
 MERCHANTS HAY & GRAIN CO., Hay, Grain, Feed
 NATIONAL ELEVATORS, Every Branch of the Grain Business
 STEINHART GRAIN COMPANY, Grain Commission
 URMSTON GRAIN CO., Grain Commission
 FRANK A. WITT, Grain Commission and Brokerage



See Article on
Page 624
This Issue

it fully describes the great possibilities of this business and the intricate manufacturing details we have perfected.



OUR line is not only complete in every respect but each individual brand is a leader in its respective field. These products have made economical production an actual fact by their high digestibility and palatability.

Scientific Feeding of Cattle and Poultry

has developed a specialized industry of great magnitude devoted to the manufacture of compound feeds.

The Poultry Man, Dairy Man and Stock Man of today is feeding in accordance with the principles of standard breeding and big egg production and is securing tremendous results in better quality and weight of his breeding stock.

The Western Feed Manufacturers, Inc., produce a **high quality ration for every feeding purpose.** The practical, simple method of production enables us to produce the largest and most complete line of animal feeding products produced in the United States. The brands under which they are produced have become universally known for quality and satisfactory results.

Behind the business is a well grounded organization whose principals have been identified in the industry for thirty years.

A Great Investment Opportunity

is presented the public by reason of the rapid expansion of this business and already a good number of conservative business men have invested their surplus funds in the Participating 8% Cumulative Preferred and Common Stock of this Corporation which is now offered at a price to yield nearly 9%. This means a very attractive, definite annual yield with even greater possibilities, together with safety because of the stability of the business.

Fiscal Dept.

Western Feed Manufacturers, Inc.

348 N. Elizabeth Street

Chicago

OUR business is good right now — write for territory proposition for live dealers and jobbers. These great rations have been built on principle and maintained on honor. If your products are not moving—get a "live" line—let us keep your merchandise feed—thirty years' experience has taught us how.



Clip the Coupon

FISCAL DEPT.,
Western Feed Mfrs., Inc.,
348 N. Elizabeth St.,
CHICAGO, ILL.

I am interested in your business from
an investment standpoint.

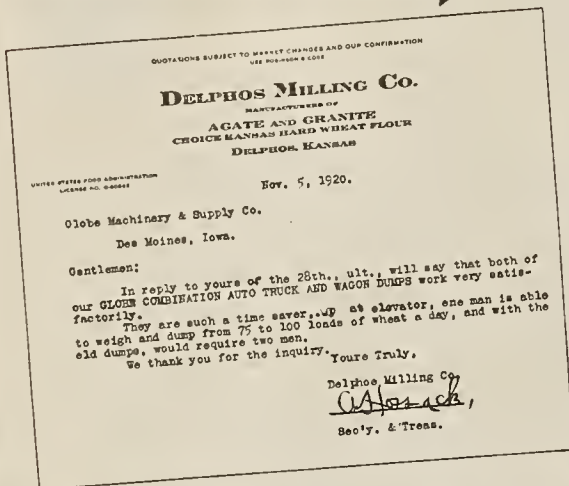
Name
Street
City

THE BEST ON THE MARKET!

Globe Combination Auto Truck & Wagon Dump
SIMPLE - RELIABLE - PRACTICAL
(SPENCER PATENTS FEB. 1919)

FOR ANY MILL OR ELEVATOR

HERE ARE TEN GOOD REASONS WHY YOU SHOULD BUY A GLOBE!



1. It is impossible to have an accident.
2. It is a time saver.
3. It is a money saver.
4. It is a labor saver.
5. It can be installed with any type, size or make of scale or independent of scale.
6. It is simple.
7. It is durable.
8. It will increase your business.
9. It is regularly inspected by our service men.
10. IT IS BACKED BY A RESPONSIBLE ESTABLISHED HOUSE. Twenty-seven years in business.

Stop wasting your time, money and energy by unloading vehicles in the old way.

You can't go wrong in sending us an order for a Globe Dump.

Our customers are numbered from the largest mills, elevators and line houses to the smaller plants, and the foremost contractors in the states.

Our service department is at the command of our users, to see that every Globe installation gives the same perfect service.

We solicit your inquiries and will be glad to send you blue prints, literature and prices, and a list showing the names of hundreds of Globe boosters.

We make prompt shipments.

Manufactured by
Globe Machinery & Supply Co.
Des Moines, Iowa.

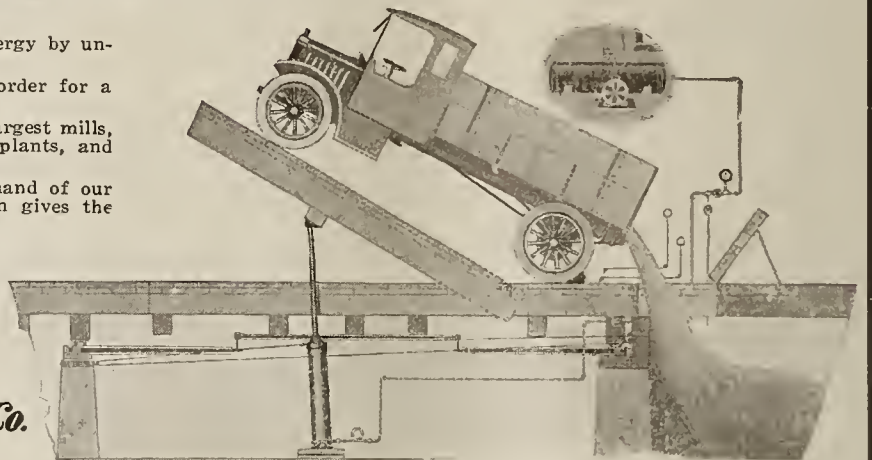
TRUCKS
DUMPS { WAGONS
SLEDs } on the one platform.
Into the same Pit-Hole.

It is the easiest, safest and quickest way to dump grain hauling vehicles.

The wonderful tilting power cylinder enables you to double your dumping efficiency at the one cost.

It is simplicity itself—a powerful air arm doing your work for you. You simply turn a valve in your driveway, and the Globe Dump does the work.

No other dump on the market so mechanically perfect, so satisfactory to operate.

The ELLIS ROTARY DRIER
BALL BEARING

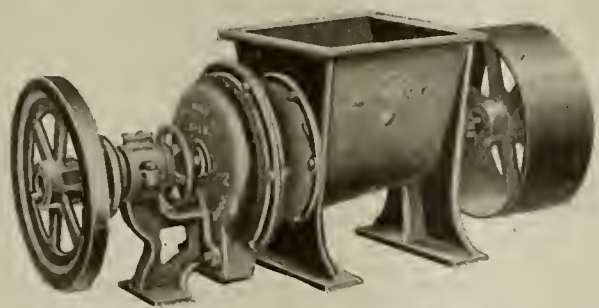
NO. 5—TYPE "A" ROTARY DRIER

to-date 20 repeat orders for Ellis rotary driers and cookers. That in itself is convincing evidence of superiority. So much so in fact that you owe it to yourself to investigate our claims, namely—That we are producing a high grade machine of utmost dependability and one which has no counterpart on the market today.

THE unretouched photograph shows an Ellis No. 5 Ball Bearing Enclosed Type Rotary Drier. It was built for special service and is considerably shorter than our standard machines.

One of the largest and oldest users of rotary driers has placed

The Ellis Drier Company, 332 South La Salle St., Chicago, U. S. A.

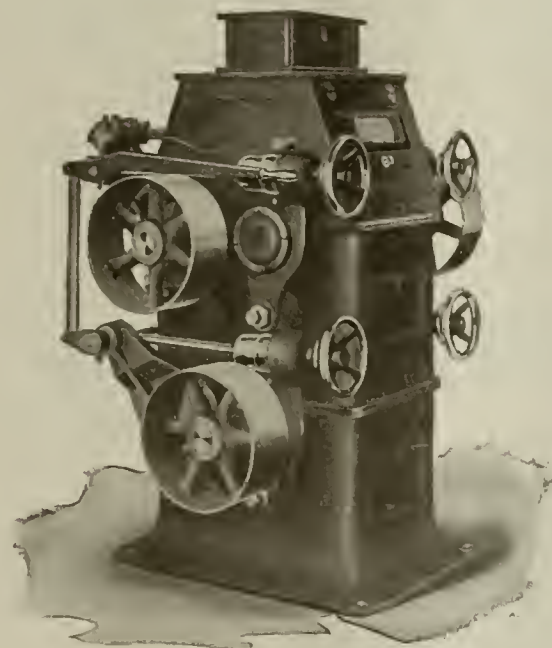


CORN AND COB CRUSHER

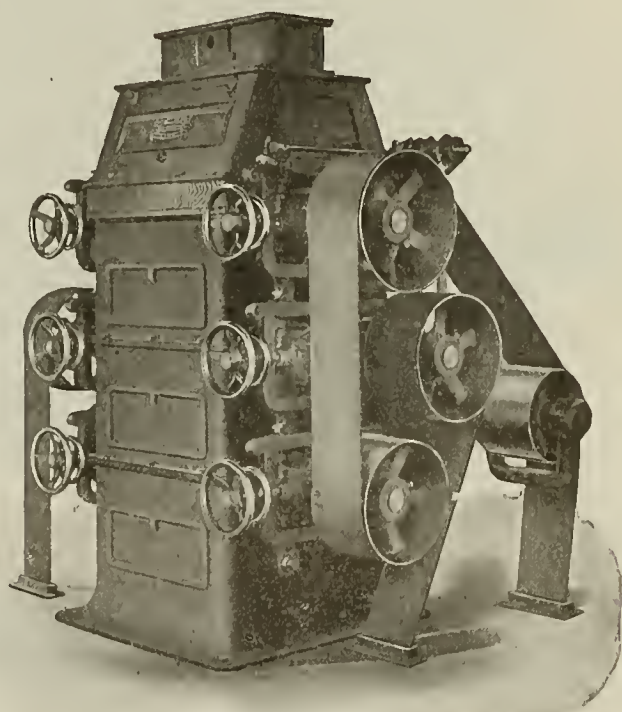
ELEVATORS USE SPARE TIME GRINDING FEED

Crush Ear Corn and reduce it to fine chop. Grind oats, barley, screenings, rye and all mixed grains. Do custom grinding. Supply your customers with the feeds they buy. Carry the profitable side lines and keep the men regularly employed. It is wiser and yields double profits.

We can supply you with any kind of a corn and cob crusher, and a feed mill of any capacity—one, two, or three pair high, crushing and flaking rolls, burr mills, attrition mills. Write for specifications and our normal level prices.

TWO PAIR HIGH
Four Rolls

THE WOLF CO.
Chambersburg, Pa.

THREE PAIR HIGH
Six Rolls

We Have Voluntarily Lowered Prices

of Trapp Truck Dumps and Trapp Combination Truck and Wagon Dumps. Trapp Dumps have been carefully tested in hundreds of cases by hundreds of purchasers. This is the leading pioneer dumping system—THE STANDARD TRUCK AND WAGON DUMP OF TODAY; and you will make a substantial addition to your equipment, and modernize your facilities for service considerably if you buy a Trapp Dump.



Don't Delay the Purchase—

OUR PRICES ARE DOWN NOW. Write for long list of installations we have made in line elevators; also reproductions of testimonial letters from actual users of both types of Trapp Dumps; and see what the buyers say after they have repeatedly tested their Trapp dumping equipments. They have always had excellent service, and THE BEST POSSIBLE RESULTS, with their Trapp Dumps—YOU CAN DO LIKEWISE.

WRITE AT ONCE—TODAY

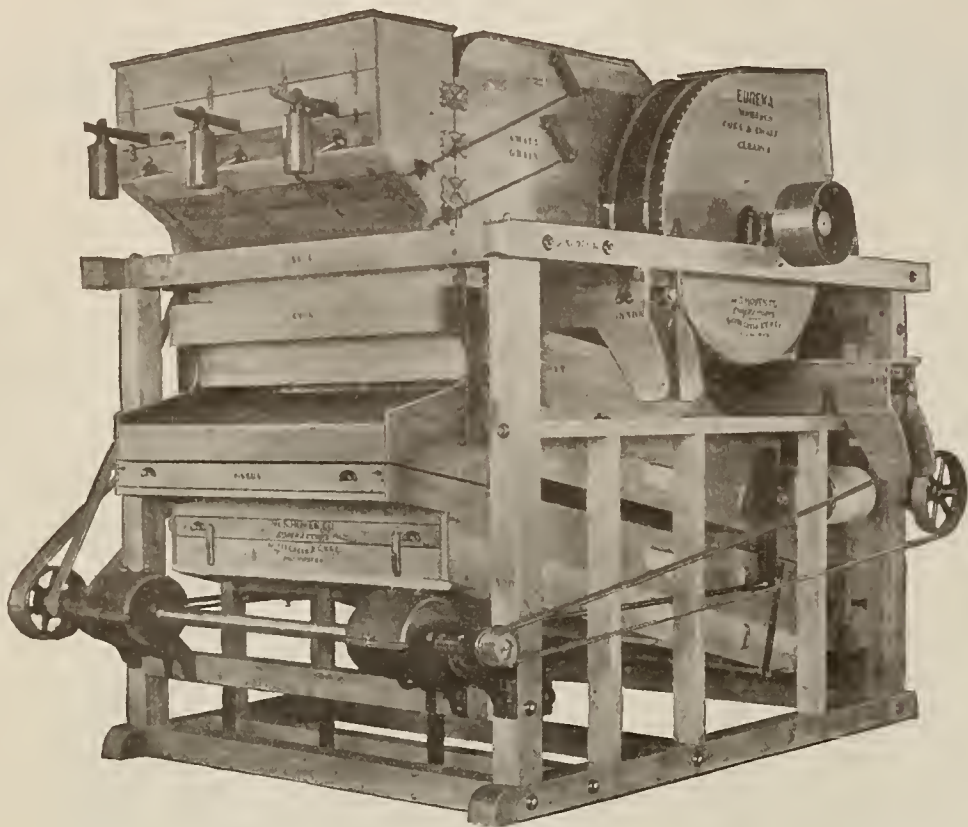
for new price schedule and full particulars regarding the advantages of Trapp Dumps.

Trapp-Gohr-Donovan Co.

1125-27-29 No. 22nd Street

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Omaha, Nebraska



THIS NEW EUREKA
for Cleaning
CORN and SMALL GRAINS
is
A Masterpiece of Efficiency!

We purposely ask you to forget any preconceived standards you may have had of efficiency, because we believe this Cleaner is going to sweep aside every precedent of desirability that you may have had of any machine designed for a like purpose.

This, our latest offering, represents the utmost in highly developed knowledge and skill.

Write for special bulletin

S. HOWES CO., Inc.
Eureka Works Silver Creek, N. Y.

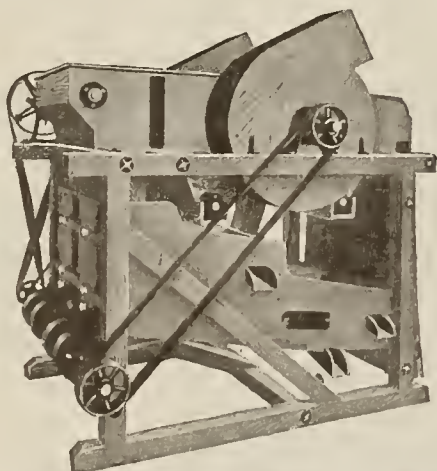


Eureka
Service Satisfies



REPRESENTATIVES

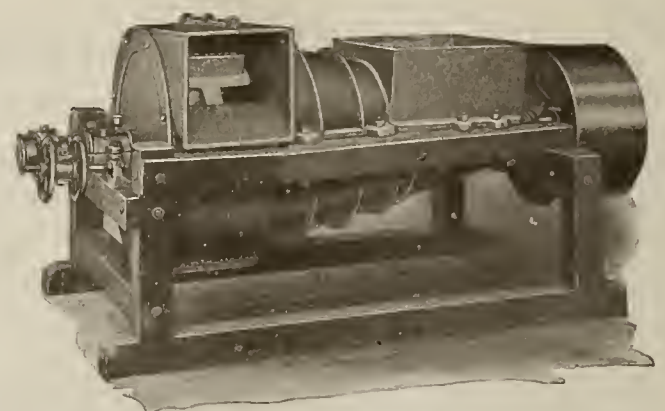
William Watson, Room 415, 111 W. Jackson Blvd., Chicago, Ill.
Geo. S. Boss, Osburn House, Rochester, N. Y.
J. E. Gambrill, 749 E. Church St., Marion, Ohio.
W. M. Mentz, General Delivery, Sinks Grove, W. Va.
J. O. Smythe, 3951 Broadway, Indianapolis, Ind.
F. E. Dorsey, 3850 Wabash Ave., Kansas City, Mo.
J. P. Stoffel, 1042 Hyperion Ave., Los Angeles, Calif.
The Brinkley Company, Seattle, Wash.
C. J. Groat, 522 Board of Trade Building, Portland, Oregon.



U. S. Twin Shoe Receiving Separator



Constant
Safety
Ball-Bearing
Man-Lift



U. S. Corn Sheller

The Reconstruction Period

finds us prepared in all respects to meet the wants of the grain trade in our usual efficient manner with prices to meet the new conditions. Quality has been and will continue to be our motto.

CONSTANT GRAIN ELEVATOR MACHINERY

is known the world over as the best machinery procurable for grain elevator work. We shall maintain this reputation throughout 1921.

Write for our late catalog

B. S. CONSTANT MANUFACTURING CO.
BLOOMINGTON - - - - - ILLINOIS

GRAVITATION

The Weight of the Loaded Truck

is the power that operates the NIPP GRAVITY TRUCK AND WAGON DUMP. No separate power such as the use of your elevator machinery, air, or other power, is used.

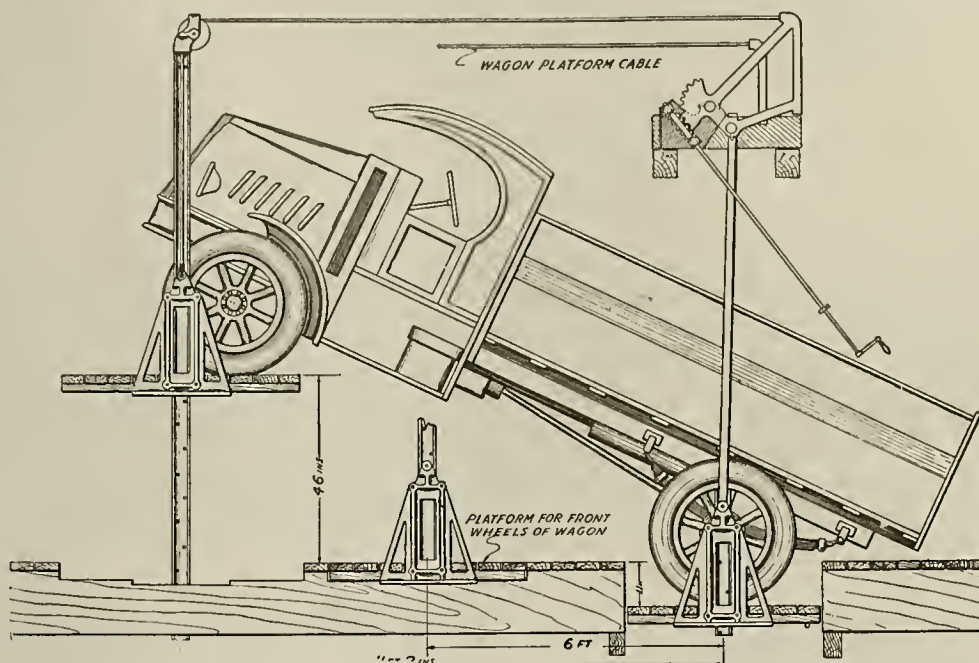
The Nipp Automatic Gravity Dump is cheaper than other dumps on the market; besides it is a truck dump and wagon dump combined—both at one price—a complete equipment that will dump all trucks and wagons.

You can buy a NIPP DUMP on A THIRTY DAYS FREE TRIAL BASIS. This will enable you to test the dump carefully before you buy it.

The NIPP DUMP furthermore can be installed on any scale platform without necessitating any changes in the platform.

Send for a detailed description

—and learn about the prices and full particulars. **YOU CAN SAVE MONEY**, yet you will get the best truck dump made if you buy a **NIPP GRAVITY DUMP**.

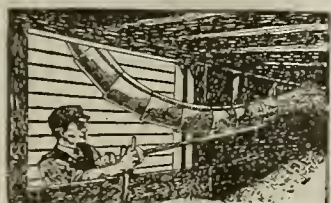


Puritan Mfg. & Supply Co.

Manufacturers of Puritan All Metal Dust Collectors;
Also a Complete Line of Elevator Supplies.

1014 No. 17th Street

Omaha, Nebraska



The Englehart Loader

Load Cars the Better Way

with an

Englehart Loader

Even loading from end to end may save expense of reinspection. A few loadings pay for it in savings.



The Cowan Dockage Tester

TEST FOR MOISTURE

OUR TESTERS ARE

Guaranteed Official Standard

Supply on Hand at All Times

In one, two, four, or six burners
For Gas, Alcohol or Electricity

We guarantee this to be strictly in conformity with Government specifications and standards as laid down in Bulletin 72, U. S. Department of Agriculture.

Test for Grain Dockage

with

The Cowan Dockage Tester

is reliable to the last kernel of the sample. Simple in construction, easy to operate, and rapid.

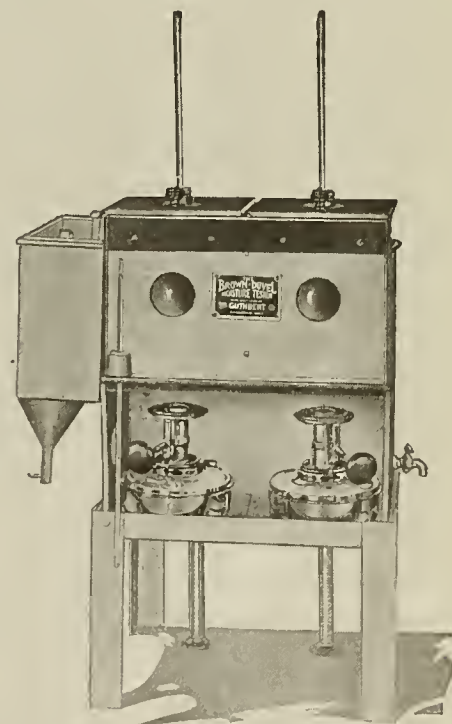
Write for full information

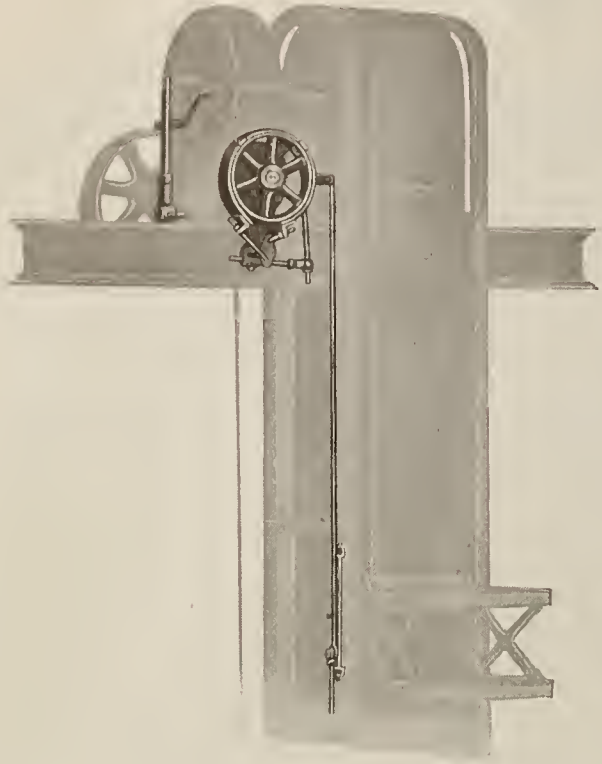
THE CUTHBERT COMPANY

MANUFACTURERS

408 Corn Exchange

Minneapolis, Minn.





N. & M. CO. SERVICE ELEVATOR
WITH
**AUTOMATIC
SAFETY DEVICE**

WITH the upper terminal automatic stop in operation there is no danger of being carried overhead and injured. The weight of the passenger after the top floor is reached automatically throws a lever, shutting off the power and applying the brake, thereby locking the belt and steps against movement in either direction.

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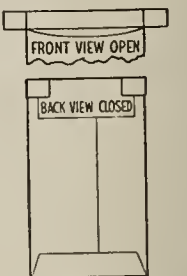
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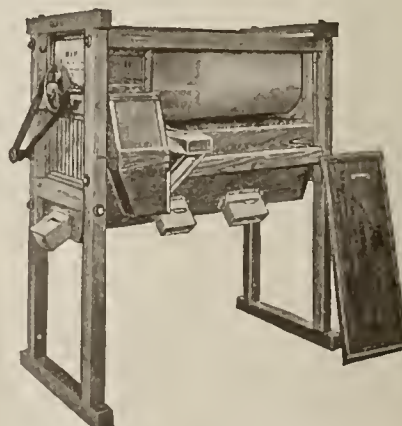
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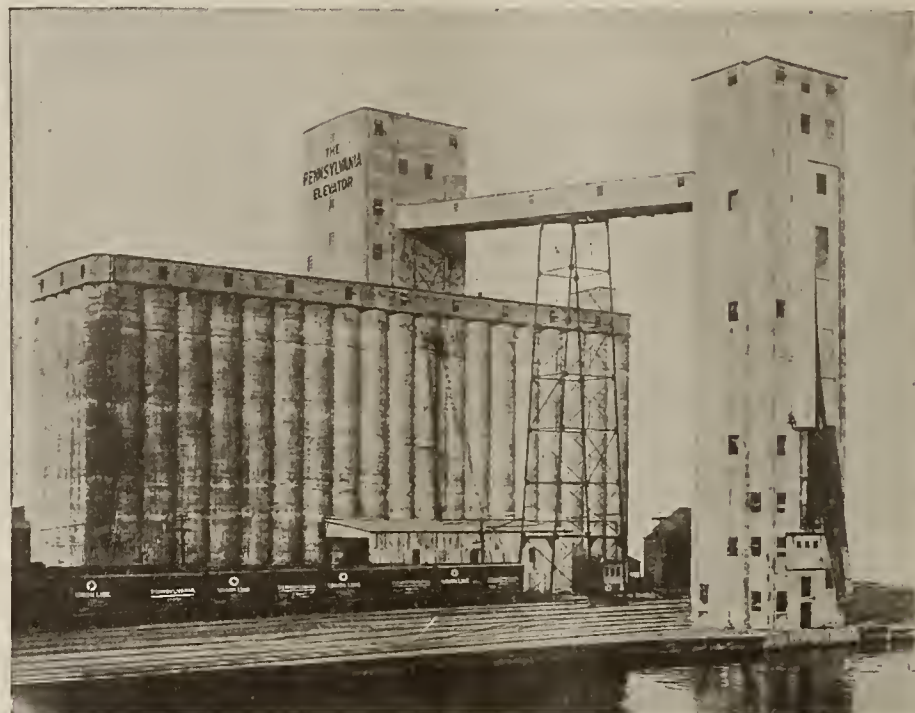
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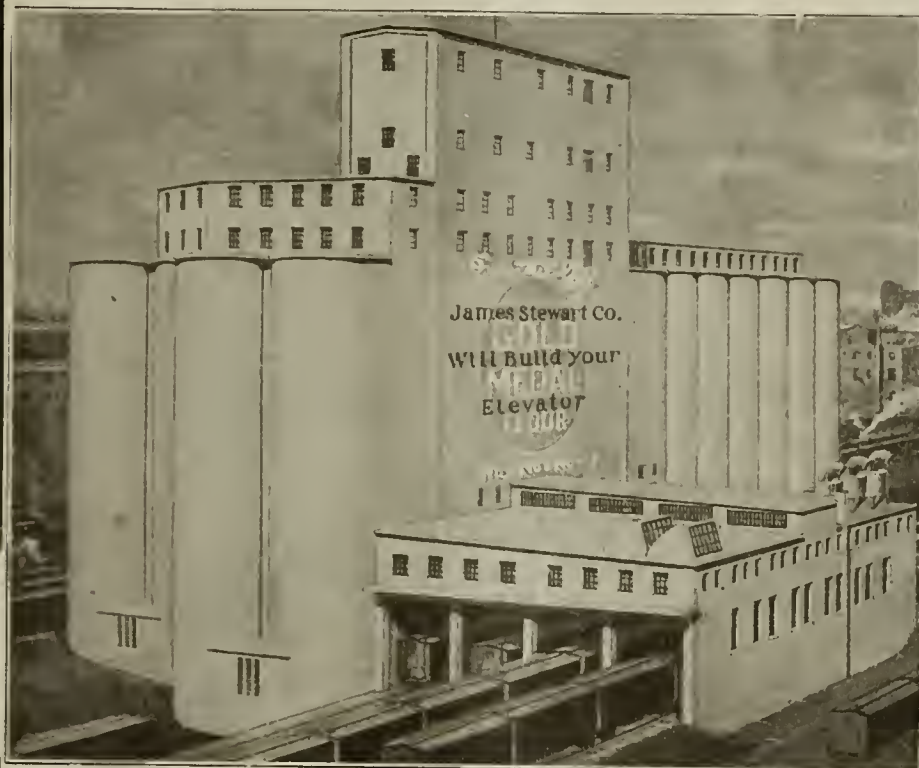
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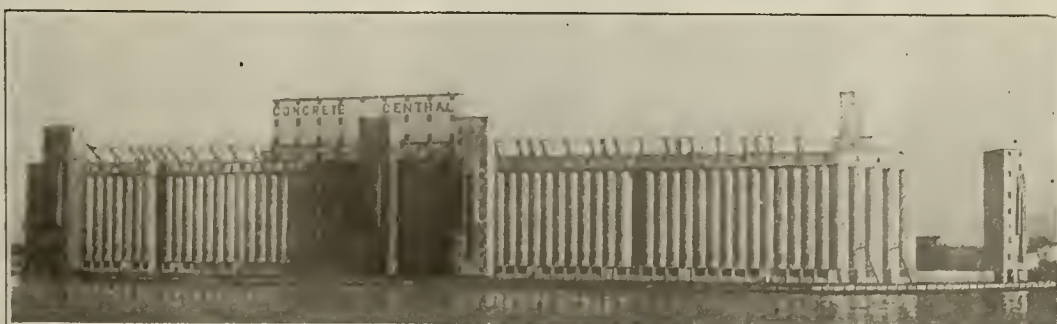
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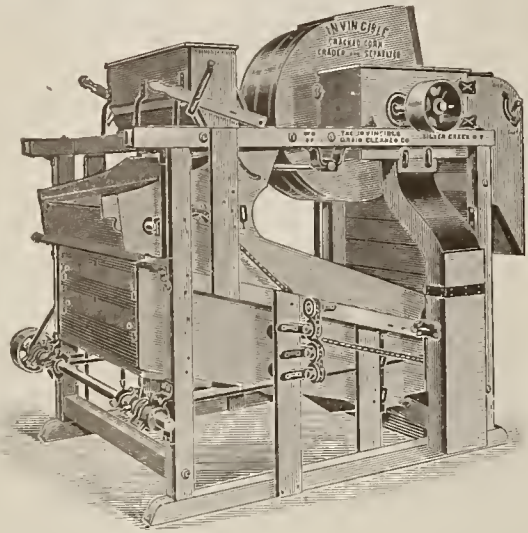
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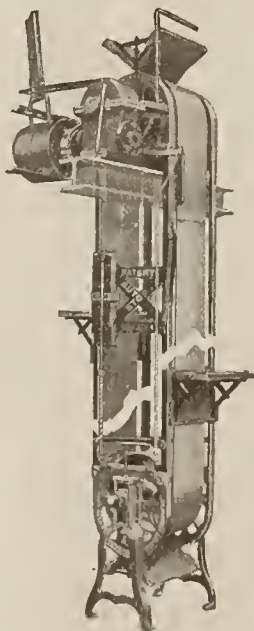
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Humphrey Elevator

1887 — 34 YEARS — 1921



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Their records of performance for these many years speak for themselves.

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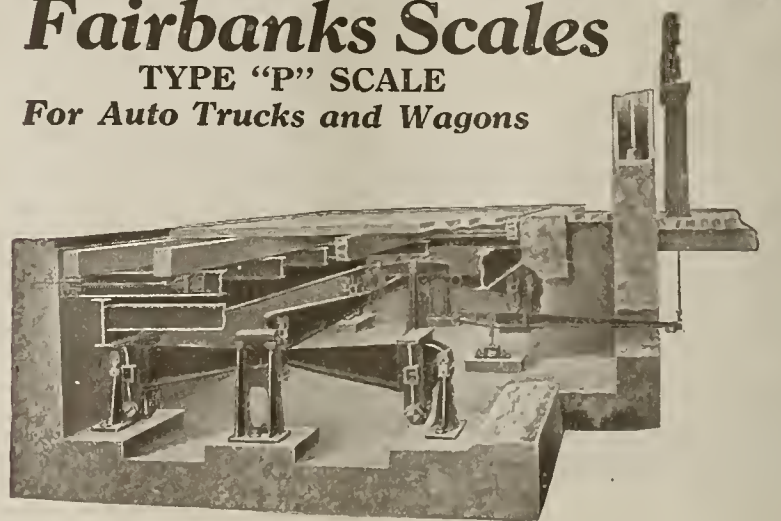
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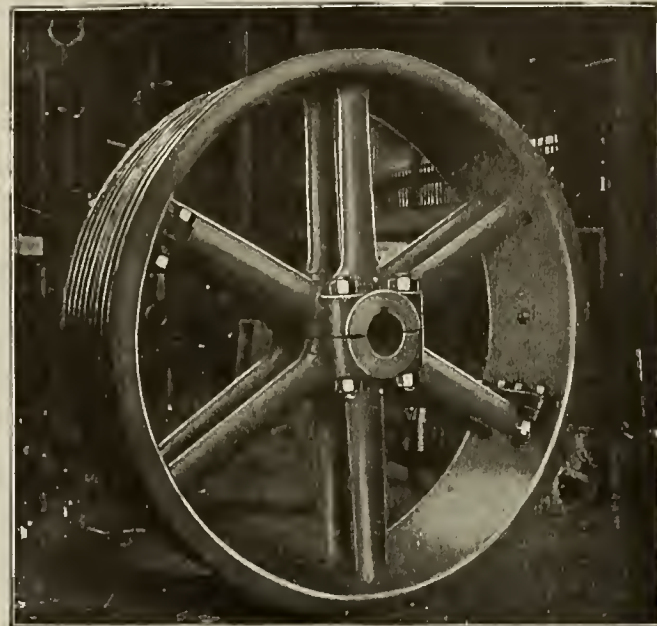
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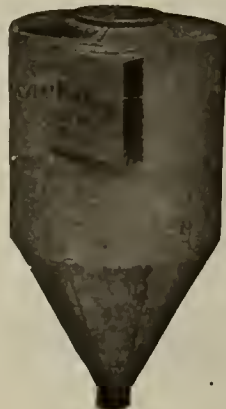
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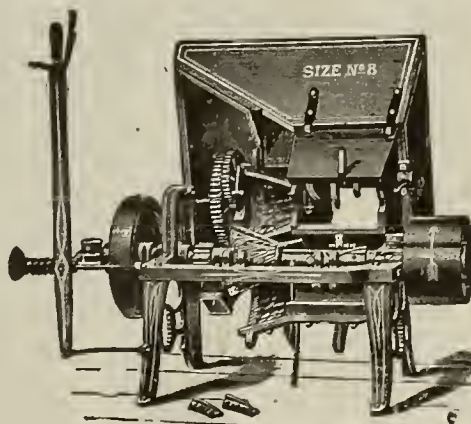
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Protect your metal grain tanks with "Tropical" Elastikote!

Elastikote forms a waterproof film over the metal. This film is unusually elastic. It expands and contracts with the surface to which it is applied. Thus it does not crack and it clings so tightly

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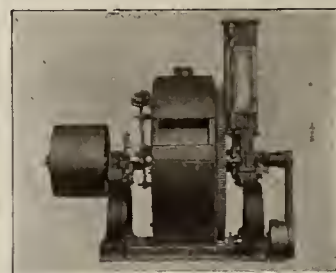


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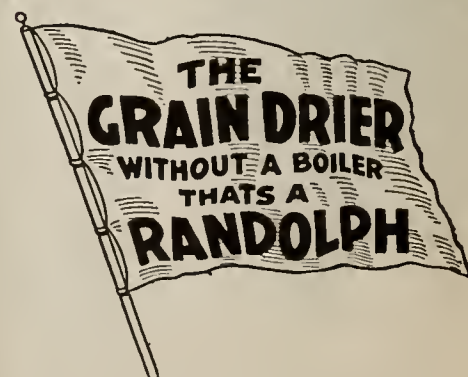
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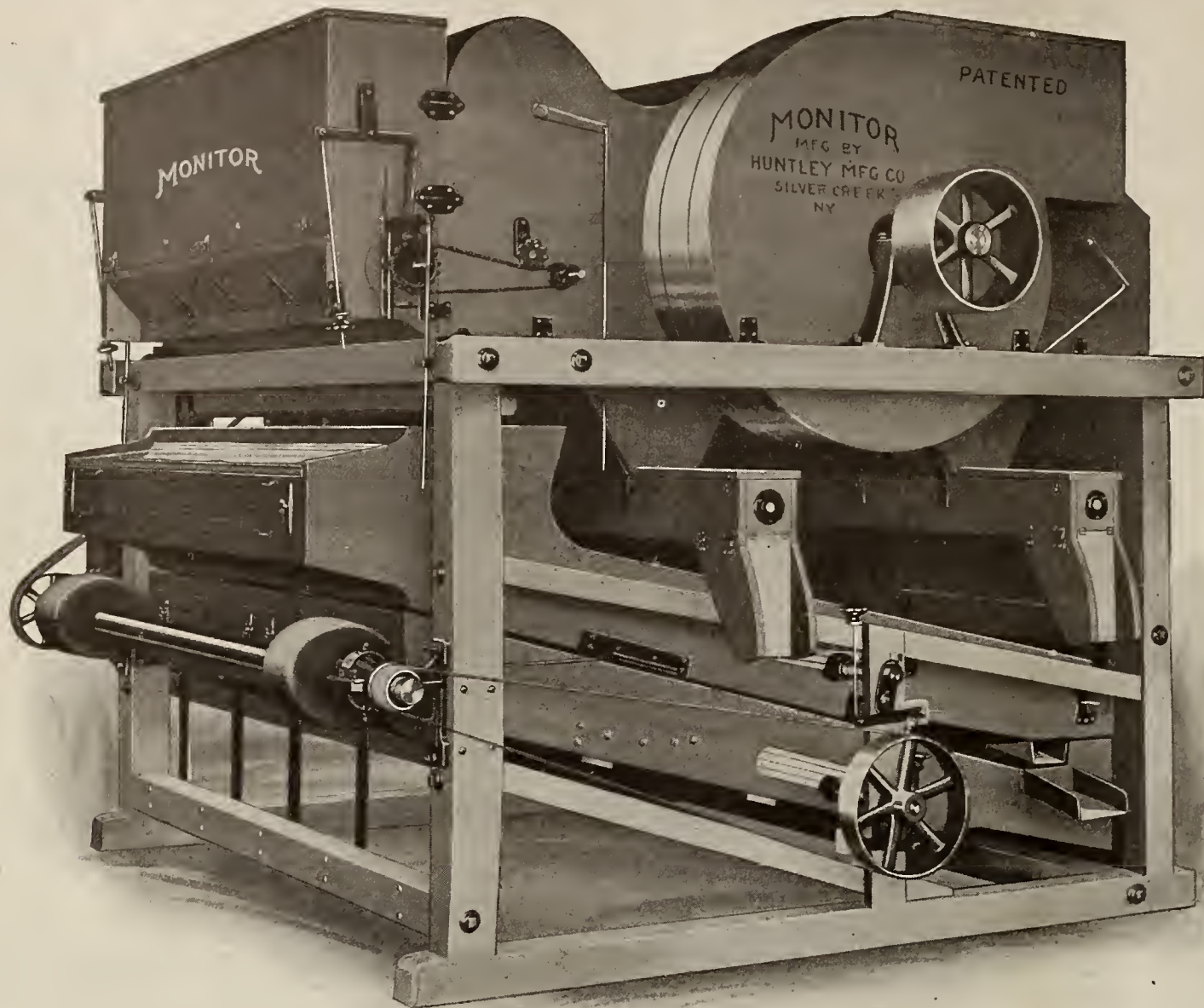
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Avoid liability by protecting your property and workmen.

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The Universal Choice of the Man Who Knows

There are separators and separators but when a separator bears the name MONITOR, nothing else is needed to convince the average grain man.

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A monthly journal devoted to the elevator and grain interests.

Official paper of the Grain Dealers' National Association and of the Illinois Grain Dealers' Association.

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Subscription price, \$1.00 per year.

English and Foreign subscription, \$1.75 per year.

Established in 1882.

VOL. XXXIX.

CHICAGO, ILLINOIS, FEBRUARY 15, 1921

NO. 8

Canadian Cereal Plant Has New Elevator

Leonard Construction Company Erects Important Unit of Quaker Oats Plant at Saskatoon Which Supplies the Canadian West With Its Products

IN SPITE of the fact that the Quaker Oats Company had 275,000 bushels storage capacity at its plant in Saskatoon, Sask., there was not enough to take care of the needs of the business at that point, so last year the Canadian branch of the Leonard Construction Company of Chicago was engaged to plan and erect a new 100,000-bushel elevator of concrete construction, which should be a complete unit in itself but which, at the same time, should be linked to all other operations of the plant. The problem was rather complicated, but the Leonard Construction Company met it to the complete satisfaction of the operators.

When the Quaker Oats Company decided to open a milling plant in Saskatchewan, it investigated carefully the question of grain supply, transportation, and market. An established milling plant was found available at Saskatoon and was purchased. This location was found to satisfy all the requirements of the company. It ranks with Regina as the greatest railroad center of the province, with the Grand Trunk Pacific, the Canadian Northern and the Canadian Pacific tapping the territory with numerous branches north, south, east and west. The grain production of central Saskatchewan has attracted the eyes of the world; this year the province has a yield of 112,000,000 bushels of wheat and its possibilities have only begun to be realized. So far as the supply of raw materials and transportation are concerned, Saskatoon could hardly be improved upon. There remained the question of markets.

The growth of the Canadian West in the last 15 years has been remarkable. Saskatoon in that period has effaced every semblance of the sprawling prairie town and is now a city of near 25,000, with all the ideals and ambition of a youthful metropolis. On all sides of it are thriving towns and cities, rapidly growing and prosperous, while the broad acres are showing fewer and fewer gaps between the cultivated plots.

This was the background which determined the

choice of location, and the subsequent course of events have shown the choice to be a wise one. From the single flour mill with its 50,000-bushel elevator the plant has expanded to about eight times its original ground area. Before this new elevator was built the plant consisted of the flour mill; Elevator "A," consisting of a headhouse and four circular tanks; Elevator "C," an eight tank storage house of 200,000 bushels' capacity connected to "A";

to overcome which proved expensive and were responsible for the loss of considerable time, but Elevator "B," the new house, has consolidated and unified the entire plant and has added materially to its value as a going concern.

The new elevator is 150 feet high, the bins being 92 feet above the track level. There are two car pullers which operate cars to the two track pits. Two elevator legs take the grain from the pits to the scale floor, from which it is distributed to any of the storage bins. There are two 100-ton Howe Track Scales, one on each track, and at the top of the house is a 1,200-bushel Fairbanks Hopper Scale and a 100-bushel Fairbanks Blending Scale. There is, in addition, a drier leg, a cleaner leg, and a light oats leg.

Among the other equipment is a Huntley No. 11 Separator; a Humphrey Manlift from the basement to the bin floor; a complete dust collecting installation furnished by the Day Company of Minneapolis; a sprinkler system throughout the plant; and a Hess Drier of 500 bushels capacity installed in the drier house. The spouting is all metal furnished by the Sheet Metal & Conveyor Company of Chicago.

With so many objectives to reach the conveying system was an intricate problem but was solved with a surprising simplicity of layout. The Weller Manufacturing Company of Chicago furnished the installation. The three elevators had to be connected as well as the two milling plants. Two 30-inch conveyor belts connect

Elevators "B" and "C." Two spouts serve between "B" and "A," and another 30-inch belt operates from "A" to "C" and then is continued on to "B." From the new elevator to the oat mill and to the flour mill 16-inch screw conveyors carry the raw material to a receiving sink in each house. Within the elevator the conveyors and cross conveyors are of 24-inch beltings. All the belts were furnished by the Gutta Percha & Rubber Manufacturing Company.

These inter-connections between the various units of the plant were lacking before, but are now



NEW QUAKER OATS ELEVATOR AT SASKATOON, SASK.

a large warehouse across the first track from the flour mill; the oatmeal mill with another large warehouse behind it; a boiler house; a large work shop; and a drier house for the oats mill. These last five buildings are separated from the first warehouse by a double track.

The plant, then, was in three sections, divided by a single railroad track on one side and a double track on the other. The new elevator and drier house are located between the tracks, and in front of the first storage warehouse. Before this last unit was added the plant had many inconveniences

complete, and the present equipment is capable of handling more than the milling capacity of the wheat and oats mills could possibly require.

The market for the flour and oatmeal has become firmly established throughout the West, and it is only a question of time, and not a long time either if present growth of the country is an indication, before the Saskatoon plant will be enlarged to rival the mammoth mills and elevators at Peterboro, Ont., operated by the same company. The Quaker Oats Company has set a high standard for its products and each unit has to conform to the standard. The Saskatoon plant has never had difficulty in meeting the requirements and so there is no question but that the new elevator will have a busy time in the future, taking care of the ever growing volume of grain coming to Saskatoon and of the increased activities of the plant.

MARKETING DATA TO BE AVAILABLE

A statistical section has been established in the Bureau of Markets, United States Department of Agriculture, to meet the need for accurate and complete figures in working out marketing problems. The statistical section has already collected and distributed in mimeographed form extensive data relating to marketing conditions, receipts, shipments, supplies, prices, etc. This information has been largely used in studying market fluctuations over short periods. Many of the files, however, now cover a period of years, and when these figures are tabulated, summarized, and analyzed by a competent statistician they should indicate significant trends and be of great assistance in the analysis of fundamental factors affecting marketing conditions. The data is compiled from a general rather than a special standpoint and is nation-wide rather than local in scope. At present, consideration is being given to the issuance of a comprehensive annual summary of marketing information in statistical form.

GUARDING AGAINST ARGENTINE QUOTATIONS

The recent extreme fluctuations in the wheat market, responding to reports from Argentine, led President J. P. Griffin of the Chicago Board of Trade to issue the following proclamation which was concurred in by the Board of Directors:

I suggest that members of our exchange, the grain trade generally, the press and news distributing agencies, for the present refrain from giving any publicity to so-called grain quotations from Argentine markets.

It is a fact generally conceded that these purported quotations do not intelligently reflect the supply and demand situation, but on the contrary are prices made through the medium of controlled markets.

From the best evidence at hand, a few powerful European grain importing concerns, most of whom directly or indirectly are the buying agencies of their governments, entirely dominate the grain markets in that country. Furthermore, the present market quotations are deceptive, in that the offerings of wheat to Europe are made conditional upon the buyer assuming the Argentine tax, which naturally must be added to the price.

In view of these conditions it is not an unfair assumption that the large European governmental buyers are using these purported quotations of our most important competitor, in the exportation of wheat, for the purpose of driving down the value of the products of the American farmer.

I am convinced the several interests to whom this appeal is directed will readily see that simple justice will compel and insure their hearty co-operation in discontinuing quotations on Argentine grains, effective immediately.

Buenos Aires, Feb. 4.—Announcement that the Chicago Board of Trade had discontinued posting Argentine grain quotations aroused protests in the press today but only caused traders to liken the Chicago decision to an ostrich hiding its head in the

sand. Many of the latter expressed their belief that American traders could not ignore Argentine prices and would be compelled by trade necessity to obtain the quotations privately, so long as the Chicago Board declines to post them officially.

Privately many of the traders admit the truth of the Chicago allegation that prices have been dominated by a group of firms and that this situation is well known to the trade here, but in talking to local newspapers they point to recently issued statistics, estimating a world exportable surplus of 170,000,000 bushels wheat, and insist that the recent sharp break in prices was due entirely to the supply and demand situation.

The question of the size of the export surtax on wheat remains undecided.

President Irigoyen today told a delegation of grain men that urged its speedy settlement that when the trade could agree on what minimum price would protect producers, the government would study a solution tending to satisfy all interests.

DEATH TAKES TOLL AT TOLEDO

"Our Boy Solomon" has sent out his last snappy message to the trade. Under this name Frank Ingersoll King of Toledo, Ohio, was known throughout this country and Europe, and he was no less well known as a wise leader, a generous citizen,



THE LATE FRANK I. KING

and a widely loved man. A great host of friends and admirers mourn his death which occurred on Saturday, January 29, after a short illness.

Mr. King was born in Paterson, N. J., in May, 1860. Shortly afterward his parents came to Toledo, and his father died when he was six years old. As soon as he could carry them, young Frank took to selling newspapers and at 12 years of age he was self supporting, going to school until he had finished high school, and laying the foundation for that industry and keen business sense which was to distinguish him all his life. He never forgot his newsboy days, and at the time of his death was trustee of the Newsboys' Association and was largely responsible for the Newsboys Building in Toledo.

After leaving school he entered the office of his uncle, C. A. King, in 1877 and was taken into the firm six years later. In 1893 C. A. King died and Frank succeeded in control of C. A. King & Co. Four times he served as president of the Toledo Produce Exchange, but his honors by no means ended there. He also served as president of the City Council and of the Chamber of Commerce and was a director of the Second National Bank, and associated with many other public institutions.

Mr. King's wife died in 1914, but four children survive, among them Fred C. King who has been associated for some years with his father in the grain and seed business and will probably direct the fortunes of the firm. The others are Mrs.

Walter Braun, Mrs. T. T. Day and Mrs. George Wallis.

Mr. King was a member of First Congregational Church and was a Scottish Rite Mason. Funeral services were held at his late residence on Jefferson Avenue, Monday, January 31 and burial was in Woodlawn Cemetery.

NEW QUARANTINE RULES FOR CORN BORER

A modification of the European corn borer quarantine announced by the United States Department of Agriculture eliminates, during the period from January 1 to June 1, 1921, the requirement of inspection and certification of celery, green beans in the pod, beets with tops, spinach, rhubarb, and oat and rye straw as such or when used as packing. During this period, it is said, there is no risk from such products even though grown in the infested area.

Most of the products of this class on sale in Boston and shipped out of that city are received from southern points. It is believed, therefore, that the new change in regulation will do away with much unnecessary work and will result in a material saving to the Department.

At present the quarantine against the borer extends to the states of Massachusetts, New Hampshire, New York, and Pennsylvania, and regulations govern the movement of articles likely to carry the pest from the infested localities to other parts of the country.

WOULD GRAIN ESTIMATES BE AS ACCURATE?

An index to the accuracy of the estimates made by the Bureau of Crop Estimates, United States Department of Agriculture, is shown by a comparison of the estimates on cotton yields made by the Bureau in December with the annual report of bales ginned issued by the Bureau of the Census the following March. The deviation of the estimates from the census during the period of 20 years, 1900 to 1919, inclusive, was 2.5 per cent and the average underestimate for the 20 years 1½ per cent. In 1915 and 1916 it was less than one-half of 1 per cent—and for the last three years it was about 3 per cent under the final census report. These later underestimates appear to have been due partly to the practice which developed during the war of prolonging the picking season and gathering unopened bolls after the close of the picking season, called "bollies" and "snaps," which was encouraged by the relatively high price for both lint and seed. This new factor appears not to have been taken into account by the cotton reporters.

STATE MILLING DOESN'T PAY

When J. A. McGovern resigned on February 1 as manager of the Drake Mill & Elevator Association, a state owned project which was reported to be very profitable, he is quoted as having learned three important things from his experience:

First, he says, a small mill is not profitable. The Drake mill could be operated at a profit of \$250 to \$300 a month by operating three eight-hour shifts daily if everything ran all right, but breakdowns, layoffs, and slackening demand would eliminate profits, as the margin is too small.

Second, that buying grain directly from farmers within the state and not from terminal markets outside the state is the best and most economic policy. He recommended the establishment of a terminal market for the state at Grand Forks.

Third, that a small mill does not produce enough flour to make it profitable to have an efficient sales force, while a large mill could sell products with considerably less overhead expense.

The Drake mill is reported to have lost \$20,000 because it failed to hedge on its transactions, but Mr. McGovern refused to comment on this. He also failed to say anything about trying to buy grain for political effect and then trying to sell flour made from that grain expecting to make money. It can't be done.

A NEW HOUSE FOR A NEW FIRM

There have been a great many changes in elevator ownership in Illinois in recent years. This has been due to a variety of causes. The call to war took some operators; farmers' elevator companies bought out plants; and the vision of larger opportunities took others from the small shipping stations to the larger grain centers.

The latter was instrumental in the formation of a new grain company at Decatur, Ill., two years ago and the building last year of a splendid new

ciated with Mr. Hunt, was ready to retire and when the new firm was organized he turned over his business to Dewein and Hamman with all his organization and connections so that they stepped into a brokerage business already established.

But the young men were not quite satisfied and

and vice-president of the Grain Dealers National Association, and has won enviable notoriety by breaking all records in the booster contests of that organization.

The firm is excellently balanced. Mr. Dewein will have active charge of the plant for which his years



VICTOR DEWEIN

100,000-bushel elevator at that point, designed and constructed by L. N. Cope & Son of Decatur.

The new firm was composed of Victor Dewein, formerly of Warrensburg, Ill., and Thurman E. Hamman of Milmine. Both men had operated elevators for about 18 years, Mr. Dewein at Warrensburg and Heman, and Mr. Hamman at Milmine and Cerro Gordo. The two had been close friends for



T. E. HAMMAN

years, both being actively interested in the Illinois Grain Dealers Association. Mr. Hamman has served on numerous committees of the organization and Mr. Dewein was its president for two terms. About two years ago both men sold out their elevator interests and formed the Dewein-Hamman Company.

W. H. Suffern, who had been in the grain business in Decatur for many years, formerly asso-

immediately made plans for building a new concrete elevator of 100,000 bushels' capacity, to be equipped with the most modern machinery. The designs were drawn and the contract was let with a local contractor and last month the new house was put in operation.

The elevator is erected on a heavy pile and slab foundation, is of concrete construction and as nearly fireproof as possible. The house is served by the Illinois Central and the Pennsylvania Railroads. There are two unloading tracks with a car dump under each, the grain being conveyed to the elevator boot. There are three elevator legs of 14,000, 10,000 and 7,500 bushels' capacity, respectively. These serve the receiving dumps, a 1,500-bushel per hour Ellis Bleacher, and a 750-barrel Ellis Drier, which is housed in a fireproof annex adjoining the elevator.

There are two 2,000-bushel Howe Hopper Scales with a 2,000-bushel garner over each scale. A No. 11 Monitor Cleaner and a No. 9 Monitor Clipper put the grain in condition, for the company is working up a trade in recleaned and conditioned corn and oats for discriminating milling and feeder trade. The elevator will be operated more as a manufacturing plant than as a mere transfer house, and the business sought is of particular customers who desire only high-grade and carefully conditioned grain and who are willing to pay for this additional service.

There are two unloading spouts serving both tracks, and the flexibility of the house is such that any of the 22 bins may be readily called upon for its contents. The elevator is electrically equipped with three motors; one of 75 horsepower and two of 50 horsepower each.

Recently the grain firm has had an addition to its membership. D. M. Cash, formerly with the Urmston Grain Company of Indianapolis, has become associated with it, and will bring a very large acquaintance in the trade and a dynamic personality to the service of the company. Mr. Cash is sec-

of experience so well fit him. Mr. Hamman's wide acquaintance among shippers of the state and pleasing personality insures his success as track buyer for the firm. While Mr. Cash will have charge of the merchandising end of the business, and will



D. M. CASH

have his office at Cairo, Ill., which is the gateway of the southeastern trade. There is little doubt that the prospects of the company are of the brightest, for they carry the good will of a host of friends in the grain trade.



DEWEIN-HAMMAN ELEVATOR AT DECATUR, ILL.

"Fire Proof" Plants and Dust Explosions

With Special Reference to An Explosion in One of the Large Grain Elevators in the Southwest

By DAVID J. PRICE*

RECENT disastrous dust explosions in so-called "fire proof" plants, resulting in extensive losses to life, grain and property, have attracted considerable attention on the part of explosion prevention engineers. Although it may be possible to construct mills and elevators of fire resistive materials and thereby permit their classification as "fire proof" plants, these explosions have very clearly shown that unless the plant is well maintained and efficiently operated, dust explosions can assume unlimited proportions.

Among the most prominent recent explosions of this nature, are included (1), An explosion in an elevator and feed mixing plant in Wisconsin where three men were killed and damage in excess of \$150,000 was done; (2), an explosion in the large reinforced concrete elevator operated by the Canadian Government at Port Colborne resulting in the loss of 10 lives and extensive property damage, and (3), a disastrous explosion in a large grain elevator in the Southwest, in which 14 men were

three tunnels. In this article these buildings have been designated as follows:

- Working or cleaning house, A;
- Center storage tanks, B;
- Outside storage tanks, C.

By consulting the ground plan of the buildings of the plant the location of all the auxiliary buildings used in connection with the operation of the elevator can be determined. These buildings consisted of a one-story brick and concrete boiler and power house, and three-story fireproof brick, steel, and concrete grain dryer, a one-story iron-clad dust house, a one-story frame pump house, a one-story iron-clad millwright shop, and an office constructed of brick. These buildings were all in the vicinity of the elevator proper, and were in fair condition.

CONSTRUCTION OF BUILDINGS

Building A—Building A, known as the working house, was constructed of concrete, brick and steel, and was 180 feet long, 60 feet wide, and 165 feet high. This building was the oldest building of the



VIEW OF THE ELEVATOR BEFORE THE EXPLOSION

killed and the plant almost completely destroyed.

This article deals with the latter explosion and summarizes the investigation conducted by the Bureau of Chemistry of the United States Department of Agriculture, in co-operation with the United States Grain Corporation, to ascertain the possible cause of the explosion and the circumstances under which it originated.

LOCATION AND DESCRIPTION OF PLANT

The elevator was an average size terminal elevator with a capacity of 1,500,000 bushels, used for handling, cleaning, drying and mixing grains of all kinds. It was an elevator built of fire resisting materials such as concrete, steel and tile, and was modern in every respect. The plant was divided into three main buildings, not including the numerous small buildings scattered about the grounds, such as the office, boiler room, millwright shop, etc. These main buildings were connected overhead by three runways and underneath the ground by

*Mr. Price needs no introduction to the readers of the "American Elevator and Grain Trade." As Engineer in Charge of the Grain Dust Explosion Investigations of the Bureau of Chemistry, Department of Agriculture, he has covered the country in conducting his work and has appeared before scores of meetings of grain dealers. The accompanying article is a valuable contribution to our knowledge of the relationship between various construction features in elevators and the hazards of fire and explosion. It should be a permanent part of the bibliography on elevator construction, and kept for reference against the time you build a new house.

plant, the storage tanks having been added to the working house later in order to increase the storage capacity of the plant from 500,000 bushels, the storage capacity of the working house, to 1,500,000 bushels. Underneath the entire building there was a basement nine feet deep. The first floor, known as the working floor, was 24 feet high, superimposed by 48 grain storage tanks of tile construction leading from the 24-foot level to the 85-foot level. Over these tanks there was a four-story superstructure known as the "texas" which extended from the 85-foot level to the 165-foot level. This "texas" was 165 feet long and 45 feet wide and was constructed entirely of tile and steel. Starting from the 85-foot level, or from the level of the top of the bins, the four floors in this superstructure were known as the bin floor, the spouting floor, the scale floor and the top floor, respectively.

The foundation and basement wall of building A were of concrete. The walls of the first or working floor were six inches thick and were constructed of reinforced concrete, fastened and supported between 18x24-inch concrete columns reinforced by six one-inch round steel bars. On the "texas" there was a six-inch curtain wall supported by exposed and unprotected steel I-beams. The storage bins were built of tile and concrete and were supported above the working floor by heavy reinforced concrete beams four feet thick and heavy reinforced concrete columns that rested on piles. The bins were 15 feet in diameter and were joined so that

the grain could be filled in between them. The storage capacity of these bins was 500,000 bushels.

The framework of the "texas," or that portion of the building above the 85-foot level, consisted of structural steel that was exposed and unprotected when considering the possibility of dust accumulating on the framework of the building, while the framework of the house underneath the tank was of concrete and steel columns that were covered with concrete and unexposed.

All floors underneath the tanks were constructed of concrete. The floor of the working floor was eight inches thick and supported by the concrete columns used to support the storage tanks. All floors in the "texas" were constructed of tile and supported by steel I beams that were exposed. The roof was almost flat and was built of tile, supported by steel roof trusses that were exposed. The building contained very few windows, and these windows were of wire glass. All window sashes were of steel.

On the south side of the building there was a shaft constructed outside, but next to the building proper. This shaft was 14 feet square and extended to the top floor of the building. It was of steel frame construction covered with tile and concrete walls, and contained the stairs that led to the "texas," the main rope drive used to propel the machinery in the superstructure, and the manlift.

On the side of the building was the working shed. This shed was 48 feet wide and extended along the entire front of the building. It extended over three railroad tracks and four sinks into which the grain was dumped in the unloading of the cars. This shed was constructed of iron and steel.

Building B—Building B consisted of 24 cylindrical concrete and tile storage tanks 85 feet high with a capacity of 500,000 bushels. On these storage tanks there was a cupola approximately 30 feet high which served as a roof over the tanks and housed the three conveying belts within the building. The bins were open. The steel roof trusses were exposed and supported the tile roof of the superstructure.

Building C—Building C was constructed just like building B. It had the same capacity, the same number of tanks, and cupola as building B.

Connection of Buildings—Buildings B and C were connected to the main working house, or building A, by means of three runways over the tanks and connecting the cupolas of B and C. These three runways came out of the bin floor of the working house and covered the three large belt conveyors used to convey the grain from the working house to the storage bins in B and C. Also underneath these buildings and leading out from the basement of the working house underneath the storage tanks there were three tunnels constructed of reinforced concrete that were used to convey the grain out from under the storage tanks to the working house. These tunnels were approximately seven feet high and six feet wide.

Building D—The grain dryer has been designated as building D. This building was fireproof and was constructed of brick and tile. Walls were 20 inches thick. It was steam heated and was used for the drying and conditioning of grains.

Building E—The power house has been designated as building E. This building was of fireproof construction with concrete floors and a tile roof supported by exposed steel roof trusses. In this building there were two Corliss type steam engines, each having 200 rated horsepower, a small A. C. dynamo generating 220 volts for lighting and power purposes, three high pressure fire tube boilers, and other power house accessories. Two boilers were in a battery and the one single.

Building F—The millwright shop has been designated as building F. This was a one-story iron-clad and frame shop used by the millwright. It had a metal roof and had stove heat.

Building G—The dust house has been designated as building G. This was a one-story metal clad building with a composition roof, upon which roof was mounted a cyclone dust collector which received all dust through a metal trunking leading from a fan on the working floor of the work house.

Building H—This building H was known as the

pump house. It was a small one-story frame building that contained an Underwriters Steam Pump connected to an eight-inch well, 110 feet deep. This pump supplied water to a 40,000-gallon tank mounted on the southwest corner of the boiler house.

Building I—The office has been designated as building I. This was a one-story brick and frame steam heated building used as the general office at the plant.

EQUIPMENT IN THE ELEVATOR

Building A contained all the machinery used for the handling, storage, cleaning, mixing and drying of the grain. All this machinery was constructed of steel and was modern and fireproof. All elevator legs were constructed of heavy plate steel and were self-supporting. Rope drives were used throughout the plant wherever possible. All rope drives were of the American plan with idlers being used as tighteners. All power was furnished by steam with the exception of one elevator leg called the dryer leg, which was driven by a 220-volt A. C. induction motor.

The basement contained the steel elevator boots, 16 in all, three conveyor belts leading underneath the storage tanks through a tunnel, four short conveyor belts leading underneath the working shed to the four sinks into which the steam shovels dumped the grain in the process of unloading the cars, a screw conveyor that ran almost the entire length of the basement, power transmission apparatus necessary for delivering power to the steam shovels in the working house and the conveying belts in the basement, and a screener.

The first, or working floor, contained all the grain cleaning machinery. This machinery was constructed of steel and was modern, and consisted of four cleaners, three clippers, one separator, one smutter and a large exhaust fan. These machines were driven at a speed of 242 r. p. m., by a line shaft which ran the full length of the house.

On the bin floor were the conveying belts and mobile trippers. One conveyor belt ran the full length of the working house and delivered the grain to the storage tanks in this house. The other three conveyor belts ran out to the annex storage tanks through the runways leading over the tanks.

The spouting floor contained the eight elevator heads of the lofters used for elevating grain to and from the cleaners and dryer. These elevator heads were driven by an auxiliary shaft propelled by the main line shaft for the "texas" on the bin floor. The head pulleys of the cleaner legs were 60 inches in diameter and 15 inches wide, and ran at a rate of 32 r. p. m.

The bin floor contained the line shaft used to propel all the machinery in the "texas." This line shaft extended the full length of the building and was driven by a rope leading from the main drive shaft of the Corliss Engines on the first floor. This line shaft ran at a speed of 100 r. p. m.

On the top floor were eight elevator heads, four receivers and four shippers. These elevator heads were driven direct from the line shaft on the bin floor with clutches on the line shaft so that they could be thrown out when not being used. The head pulleys were 84 inches in diameter and were driven by sheave pulleys 110 inches in diameter that ran at a rate of 29 r. p. m. Also on this floor there was a small counter shaft which drove an exhaust fan used for gathering the sweepings.

Almost all bearings were of ring oil or of the heavy duty cup grease type. All line shafts were mounted on non-vibrating and stable steel supports.

The plant was lighted by 220-volt electricity furnished by a plant dynamo. No provision was made for lighting when the plant was not in operation. Almost all electric lights were of carbon filaments and were unprotected. Lights were controlled from switch boxes on the floors containing knife switches. All wiring was in conduit. Lights were suspended from the ceiling by cords. Dust proof sockets and bulbs were not used. All heating was done by steam from the exhaust steam of the engine.

DUST COLLECTING SYSTEM

Besides the fan on the individual cleaning machines, such as the four cleaners, three clippers, one separator and one smutter, there were two fans, 10 metal cyclone dust collectors and various floor

sweeps used in making up a system for handling dust within the house. The cleaning machines were situated on the work floor and spouted directly to an individual metal dust collector, making nine cyclones on this floor, all of which were vented and exhausted their light dust to the atmosphere outside the building. One collector was located on the top floor and one on the top of the dust house. One fan was located on the work floor, while the other was on the top floor. The various cyclones on the work floor were so connected that the heavier dust dropped into a main trunk line which extended through the basement until it reached a point where the fan stood. It turned there and came through and connected with the fan on the work floor. From the fan the trunk line extended up and out the east side of the elevator, leaving it at about a 16-foot elevation from the work floor. The work floor fan had a diameter of some 48 inches while the main trunk line in the elevator was 20 inches in diameter and increased in size to 30 inches in connecting with the cyclone on the dust house. The opening in the end of the main trunk line situated in the basement of the elevator was four inches.

The heavier dust from the cyclones dropped into this main trunk line and was blown to a cyclone on the top of the dust house, which was located some 50 feet away from the elevator. The heavier dust

was kept filled with water by means of a steam driven pump located in the pump house directly east of the boiler house.

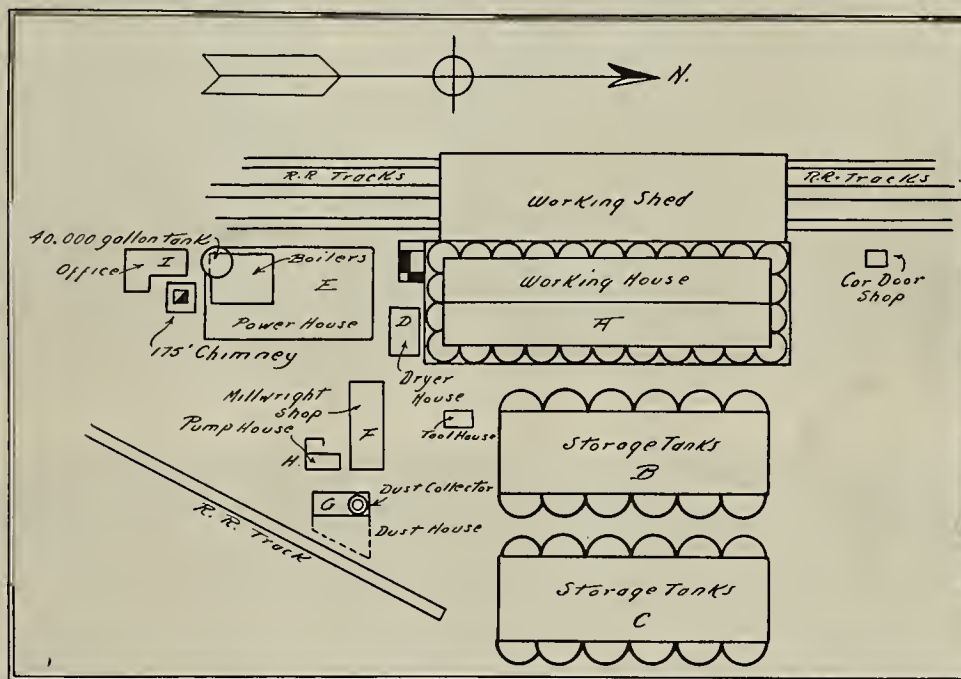
THE EXPLOSION

From the statements of the survivors and other workmen interviewed, it appears that the plant was being given what was termed a "general clean-up" which had practically been completed at the time of the explosion. Part of the elevator was in operation. One of the conveyor belts in the basement was carrying grain that was being mixed to No. 3 shipper leg which elevated the grain into the "texas" for loading the cars.

Six men were sweeping and brushing down the cobwebs in the basement and carrying the sweepings to a suction spout which was connected to the dust house outside of the plant. Men were working in the dust house loading a car with dust. The working floor was being cleaned down, and men were sweeping on the bin floor. Other employees were engaged in their customary work when the explosion occurred.

ORIGIN OF EXPLOSION

From the damage resulting from the explosion it appeared that the vicinity of receiver No. 3 was a very likely place for the origin of the explosion. The concrete pillars on the west wall directly opposite No. 3 leg were completely dislocated and hurled many feet. Both the No. 3 receiver and



GROUND PLAN OF THE BUILDINGS

from this cyclone dropped into the dust house and when the house was filled it was loaded in bulk into cars. In addition to handling the dust from the cyclones, the fan on the work floor arranged to handle the dust from the receiving and loading legs, as well as the various floor sweeps. For some months previous, however, it is said the suction on the receiving and loading legs had been disconnected, and in so doing caused some of the floor sweeps to be put out of commission—the installation being such that some of the sweeps would not work unless the suction was being applied on the legs. Extending from the fan into the basement was a spout through which heavier particles, such as nails, pieces of corn, etc., were dropped onto the basement floor. The 36-inch fan on the top floor connected to the garners and exhausted into a cyclone on the top floor. This cyclone was vented outside and the heavier dust dropped originally to a spout which connected to the main trunk line.

FIRE PROTECTION

For inside fire protection the plant had barrels and buckets scattered throughout the work house and cupola of the annex bin sections, with fire extinguishers on every floor.

For outside fire protection, the plant had two 2½-inch double hydrants with 250 feet of 2½-inch cotton jacketed hose in adjacent hose house. These hydrants were located at north and south ends of working house and were supplied with water from private source or from a 40,000-gallon wooden elevated tank located on the southwest corner of the boiler house 46 feet off the ground level. This tank

shipper had the return side of their legs badly ruptured. No. 2 scale, counting from the north and directly opposite No. 3 legs, was damaged while all the other scales were left in good condition. The ceiling of the working floor in the vicinity of No. 3 leg was badly battered by pieces of flying concrete. All evidence from the north, east, south and west portions of the plant show conclusively that the explosion originated around No. 3 legs in the basement.

It appears that the explosion started in the basement, blew out the floor and walls of the working floor, and then propagated to the "texas" through the manlift shaft on the south side of the elevator. All the walls were off this manlift shaft as the result. Upon reaching the "texas" the explosion propagated through the floors and blew out the thin tile curtain walls.

RELATIVE HUMIDITY

Since the relative humidity has been considered a very important factor in determining the cause of dust explosions, a copy of the relative humidity readings from the period of September 1 to September 15 is given:

September 1—38	September 8—53
" 2—38	" 9—50
" 3—37	" 10—45
" 4—41	" 11—43
" 5—39	" 12—32
" 6—43	" 13—33
" 7—50	" 14—25
	" 15—39

It will be noted that the average relative humidity was below the normal for this period of the

(Continued on Page 634)

With Faith in the Future

Tumbling Markets Have Little Effect on Demand for the Numerous Products of Western Feed Manufacturers

THE year just closed was a trying one to the feed manufacturers. The period of readjustment which affected farm products first of all, created an uncertainty of values and a steady decline in markets that took all the confidence out of the buying public. In addition the winter was unusually mild, and there was an unprecedented supply of feeding grains and hay on the farms. It is not to be wondered at that a great many feed manufacturers and dealers became discouraged.

Every year for some time the farmers of the country have become more thoroughly convinced of the value of scientifically prepared feeds, as against the hit or miss feeding of home-grown grains and other feedingstuffs. This education has progressed

"Rep," "Sure-pay," "Sincerity," "Plente-grain," etc.

The Western Feed Manufacturers, Inc., was incorporated under the laws of the State of Illinois, December 15, 1919, with an authorized, paid in capital of \$400,000. The company acquired the old established business of A. Eichenbaum & Sons and the elevator, mill and warehouses of Hales & Edwards Company, known as the Edwards Elevator and Warehouses. To provide for additional development of the business the capitalization was increased to \$600,000.

The company manufactures 35 scientifically balanced rations for the feeding of live stock and poultry. In addition, it deals extensively in hay, straw, and grains. Its brands of manufactured feed

of experienced men, long identified with the trade. The organization is well balanced throughout.

Wm. Eichenbaum, president, has had 19 years' experience in the grain and feed industry. Daniel A. Quinn, general manager, has had years of experience in the business and specializing in his present duties of formulas, sales, trade promotion and advertising. J. G. Eichenbaum, secretary, has been identified in this trade for 12 years, and Adolph Eichenbaum, treasurer, is one of the pioneers of the business, having established himself 29 years ago. The active management of this business will remain in the hands of the present officers.

The scientifically prepared mixed feed for fowl, cattle and horses is the result of deep study of the subject of economical and balanced rationing. Government statistics and other data bear out the advantages of balanced feeds over unprepared feeds in point of economy, fattening and strength giving qualities. While the industry is already developed to a high point, its possibilities are unlimited be-



A Few of the 76 Feeders in the Mixing Room



Automatic Scales and Sewing Machines



Separating and Grinding Room



Loading Floor With Belt Conveyors

SOME INTERIOR VIEWS IN THE PLANT OF THE WESTERN FEED MANUFACTURERS, INC., AT CHICAGO, ILL.

in the face of a determined effort by some of the state schools to convince livestock and dairy men that the barn floor and hoe mixer was the most economical. Too many stockmen, however, have kept books on their operations and have proved to their own satisfaction that prepared feeds, put out by reputable dealers, were the best and cheapest in the long run.

But the combination of circumstances last fall was too much for even these proprietary enthusiasts, and a great many consistent users of feeds went back to the old methods, much to the sorrow of many manufacturers. It is rather significant, then, that even in such a year the Western Feed Manufacturers, Inc., of Chicago, Ill., should have had sales which totaled over \$2,500,000. It speaks highly for the supreme confidence which the feeds have established, and the efficient and helpful policy of the company which makes them. Among the best known of the trade mark brands are "Gro-Big,"

are widely known, each of which is distributed under trade name, copyrighted and entered in the U. S. Patent Office.

The mill and warehouses of the company are strategically located for efficient transportation and shipping facilities on the Pan Handle division of the Pennsylvania Railroad. Switching facilities at elevator doors permit a car to be handled every 20 minutes which insures rapid and economical transfer of materials. The mill has an enormous capacity of a complete line of mixed feeds. It is modern in every respect and completely equipped with mixing units and machinery. The company operates from team tracks at Elsmere Station, Chicago, at which point hay and grain is jobbed direct to dealers. In addition they have a branch at 3425-31 Armitage Avenue, from which distribution to the consumer trade is made. The mill is at 345 North Elizabeth Street, and warehouses on Carroll Avenue.

The management of the business is in the hands

cause it serves the needs of a field as extensive as the field of the manufacturers and purveyors of prepared foods for the human race. The Western Feed Manufacturers, Inc., are pioneers in the industry and have already gained the impetus in their sales of well established, dependable, trade marked feeds.

The equipment of the plant is unusually complete and is kept in excellent condition under the watchful care of Superintendent Andrews. In the mixing room (Plate 1.) are 76 Gardner Feeders which are automatically regulated and are adjusted in accordance with the various formulas. They are tested by proportionate weights at regular intervals so that uniformity of product is assured. All of the feeders can be operated at one time or in separate units.

The weights in the plant are secured over a Columbia Wagon Scale, a Howe Hopper Scale, two Sonander Scales and automatic scales on the feed

packers (Plate 2). The filled sacks are sewed on four Union Special Sewing Machines. The packers and sewing machines have a combined capacity of 27 sacks per minute, or 1,620 100-pound bags per hour.

The grain is cleaned on one Invincible Separator and one side shake Eureka Cleaner. The grinding is done on a Robinson Attrition Mill and on three double stands of 9x30 rolls, one Barnard & Leas and two Allis-Chalmers. The separations are made on seven reels and six Beall Aspirators. The cleaning machinery is shown in Plate 3.

The machinery is electrically driven. For the most part the motors are direct connected, but in some cases belt or chain drives are used.

The handling of the products through the plant is done over screw and belt conveyors, planned to eliminate all hand labor possible. There are four separate and complete belt conveyors equipped with Rexall Belting. Each conveyor has two openings, permitting the loading of two cars and several trucks at the same time. The bulk products are handled by the screw conveyors either to cars or trucks. One of these belt conveyors can be seen in Plate 4.

The plant operates five motor trucks which make deliveries direct from the plant in the city and over a wide radius to the suburban towns.

By working a double shift the plant is able to produce 480 tons of scientifically balanced rations per day, and the activity of the place, even in these depressing times bears witness to the popularity among feeders of the lines which the plant produces.

FINAL REPORT ON CANADIAN CROPS

The Dominion Bureau of Statistics has issued its final annual report on the area, yield, and value of the field crops of Canada for the year 1920. The total yield of wheat for the year is returned as 263,189,300 bushels from 18,232,374 acres, compared with 193,260,400 bushels from 19,125,968 acres in 1919, and with 254,480,440 bushels from 16,343,969

with 394,387,000 bushels from 14,952,114 acres in 1919, and with 419,774,940 bushels from 13,121,604 acres, the 5-year average. The total is 12,348,300 bushels less than the Bureau's provisional estimate of October 29 last. The average yield per acre is $33\frac{1}{2}$ bushels, as against $26\frac{1}{4}$ bushels in 1919 and 32 bushels, the 5-year average.

Barley yielded 63,310,550 bushels from 2,551,919 acres, as compared with 56,389,400 bushels from 2,645,509 acres in 1919, and with 57,104,298 bushels from 2,342,570 acres, the 5-year average, the average yields per acre being $24\frac{3}{4}$ bushels for 1920, $21\frac{1}{4}$ bushels in 1919, and $24\frac{1}{2}$ bushels, the 5-year average.

Flaxseed gave a total yield of 7,997,700 bushels from 1,428,164 acres, as compared with 5,472,800 bushels from 1,093,115 acres in 1919, and with 6,367,340 bushels from 840,375 acres, the 5-year average. The yield per acre in 1920 is 5.6 bushels, as against 5 bushels in 1919 and $7\frac{3}{4}$ bushels, the 5-year average.

For the remaining grain crops the total yields were in bushels as follows, the corresponding totals for 1919 and the 5-year average being given within brackets: Rye, 11,306,400 [10,207,400 and 5,586,320]; peas, 3,528,100 [3,406,300 and 3,385,778]; beans, 1,265,300 [1,388,600 and 1,472,396]; buckwheat, 8,994,700 [10,550,800 and 8,583,520]; mixed grains, 32,420,700 [27,851,700 and 21,554,696]; and corn for husking, 14,334,800 [16,940,500 and 11,911,680]. The average yields per acre of these crops are in bushels as follows: Rye, $17\frac{1}{2}$ [$13\frac{1}{2}$ and $15\frac{1}{2}$]; peas, 19 [$14\frac{3}{4}$ and $16\frac{1}{4}$]; beans, $17\frac{1}{2}$ [$16\frac{1}{2}$ and $15\frac{1}{4}$]; buckwheat, $23\frac{3}{4}$ [$23\frac{1}{2}$ and $20\frac{3}{4}$]; mixed grains, 40 [31 and $33\frac{3}{4}$]; and corn for husking, $49\frac{1}{4}$ [64 and $50\frac{3}{4}$].

The yield of hay and clover is 13,338,700 tons from 10,379,292 acres, as compared with the previous year's record of 16,348,000 tons from 10,595,383 acres, and with the five-year average of 13,988,800 tons from 8,992,659 acres. The average yield per acre is 1.30 tons, as against 1.55 tons for 1919 and for the five years 1915-1919.

The yields from the three Prairie Provinces

CHICAGO GRAIN VETERAN DIES

On Thursday, January 27, the Chicago Board of Trade lost one of its oldest members in the death of Henry W. Rogers, who began business as H. W. Rogers & Brother in 1862. This grain commission firm operated without a change in membership till 1919, and then became the Rogers Grain Company upon his retirement. He sold his membership on the Board about a month before his death.

Mr. Rogers was born in New York State 89 years ago, coming to Chicago in 1862. He immediately



THE LATE HENRY W. ROGERS

joined the Board of Trade, and filled all the offices, serving as president in 1881. He was a director for many terms and was regarded as an authority on many phases of the grain business. In the many years he made a host of warm friends who will feel keenly that they have sustained a loss.

Funeral services were held Saturday afternoon, January 29, at 3 o'clock, at his late home, 1554 Dearborn Parkway, but interment was at Buffalo on Sunday. President Griffin appointed the following committee to represent the Board of Trade at the funeral services: Hiram N. Sager, R. G. Chandler, Z. R. Carter, John A. Bunnell, Edward Andrew, Caleb H. Canby, L. F. Gates, J. G. Steever, Wm. N. Eckhardt, Edw. S. Adams, Wm. L. Gregson, John H. Jones, Frank B. Rice, A. E. Cross, Jos. Simons, James A. Patten, C. H. Sullivan, H. M. S. Montgomery, C. T. Trego, E. W. Wagner, I. P. Rumsey, A. W. Green, C. H. Taylor, B. Frank Howard, Geo. E. Marcy, J. J. Badenoch, Erich Gerstenberg, William Nash.

CONCEALED SPACES ARE A FIRE HAZARD

The latest bulletin of the Mutual Fire Prevention Bureau, Oxford, Mich., tells of a small recent mill fire at Omaha and points a moral therefrom. The bulletin says:

"The sprinklered flour mill of the Omaha Flour Mills, Omaha, Neb., sustained a small damage by fire on December 28. Mill had not been operated for three days, and fire originated from no ascertainable reason in the ceiling of packing room or in the dead space between the floor above and the ceiling of packing room, probably the latter. It is probable that some material accumulated in the dead space mentioned and ignited spontaneously. Fire communicated to two stands of elevators, and if it had not been for the prompt and efficient action of their automatic sprinkler equipment it is probable that the plant would have been totally destroyed.

"We are again reminded that concealed spaces in flour mills are hazardous and fires originating therein are very difficult to control. The automatic sprinkler has again demonstrated its efficiency even under difficulties."



PLANT OF THE WESTERN FEED MANUFACTURERS, INC., CHICAGO

acres, the annual average for the five years 1915-1919. The total yield for 1920 is 30,171,700 bushels less than the estimates issued October 29, 1920, this difference being mainly due to the disappointing yield per acre in Saskatchewan, which was only $11\frac{1}{2}$ bushels instead of $13\frac{3}{4}$ bushels as then reported. The average yield per acre for Canada is $14\frac{1}{2}$ bushels, as against 10 bushels in 1919 and $15\frac{1}{2}$ bushels, the 5-year average.

For oats the finally estimated production is 530,709,700 bushels from 15,849,928 acres, as compared

(Manitoba, Saskatchewan, and Alberta) are: Wheat, 234,138,000 bushels from 16,841,174 acres, as compared with 165,544,300 bushels from 17,750,167 acres in 1919; oats, 314,297,000 bushels from 10,070,476 acres, as compared with 235,580,000 bushels from 9,452,386 acres in 1919; barley, 40,760,500 bushels from 1,838,791 acres, as compared with 36,682,400 bushels from 1,800,745 acres in 1919; flax, 7,588,800 bushels from 1,391,076 acres, as compared with 5,232,300 bushels from 1,068,014 acres in 1919.



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This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

Official Paper of the Grain Dealers National Association and of the Illinois Grain Dealers Association

CHICAGO, ILL., FEBRUARY 15, 1921

THE POLITICAL CODDLERS

THE favorite indoor sport of speakers on agricultural subjects is to condemn the policy of the United States toward the farmers. The assumption seems to be that the farmer needs some particular treatment different than that of the rest of the community. In an address before the National Canners Association, C. G. Woodbury, director of the Bureau of Raw Products Research of the Association, declared that it was folly for the Government to spend but 1 per cent of its outlay on "research education and the development of our natural resources and the productive power of our soils while the other 99 per cent went for other purposes."

Government agricultural research is now about 25 years ahead of average farm practice and will probably always remain so even though the appropriation should be reduced to the famous one-half of 1 per cent. It isn't scientific aid which the farmer requires, it's coddling. Politicians have told the farmer for so many years that he is a poor, abused, exploited mortal that he has come to believe it. So now he wants special financial aid, special marketing privileges, and special everything else. He wants recognition as a class, when he is only one of 100,000,000 citizens of the country, infinitely better off than the average city wage earner, and with a perfect right to go into industry if he doesn't like farming.

We have no fear that the nation will ever starve. If the present agriculturalists quit, others will take their places. But they will not quit. They know they have a good thing. In spite of the hard work through eight

months of the year, in spite of constant disappointments and harassing insect and meteorological pests, in spite of unsatisfactory markets at times, the farmers average greater prosperity than the urbanites. At least they can always work, which is about the most satisfactory thing in life after all, and that is more than the wage earner can be sure of.

SOME FACTS OF INTEREST

GRAPHIC illustration brings home comparative facts better than any other means. W. Sanford Evans recently published a diagram which shows the course of wheat prices in Canada compared with general commodity prices. The graph would answer for this country as well, for the variation would be immaterial.

In 1913 and 1914 wheat and commodity prices were practically at a level. Using this level as a starting point and calling it 100, we find that in the crop year 1914-15 general commodity prices rose about 10 per cent while wheat in May touched 180 per cent of the 1913-14 level. In 1915-16, when the submarine menace was at its worst, wheat dropped back to the commodity level, which in July of 1916 reached 130 per cent. Beginning the crop year of 1916-17 wheat was from 30 to 120 points above commodity prices, reaching 300 per cent in May, 1917, while the highest point made by commodities during that 12-month period was 180 per cent.

The next two years, wheat prices were fixed at about a 250 per cent level compared with 1913-14, and during these 24 months general prices were gradually raised from 180 to 220 per cent. The crop year 1919-20 saw wheat prices rise from 250 to 350, and then begin the toboggan slide which has caused so much recent trouble. General wholesale prices in 1919-20 rose from 220 to 260 per cent, the high point, before they too began to recede.

For more than four years the wheat farmer had an advantage over the rest of us, in that he received more in proportion for his products that he had to pay for general merchandise. Is it, then, unreasonable that he should stand his share in the loss occasioned by the readjustment?

CORN AND OATS EXPORTS

THE conversation turned, as it occasionally does among grain men, on the probable prices of corn and oats. It was suggested that the export demand might be a determining factor, but no one in the crowd had a very definite idea of what our exports of corn and oats had been in the past. This may or may not have a bearing on the price this year, but for those who are in the same case as the dealers mentioned and are interested in export figures, here are a few.

During the nine year period, 1911-1918, we exported an average of 1.59 per cent of our corn crop; 22.85 per cent of our wheat; and 4.41 per cent of our oats, the latter figure being for seven years ending with 1918 instead of nine as for corn and wheat. The highest export figures for any one crop year during this

period were, for corn, 64,720,742 bushels in 1917; for wheat, 259,642,533 bushels in 1915; and oats, 105,881,233 bushels in 1918. The average for the period for oats would be much higher except for the fact that in 1914 we only exported 1,859,949 bushels, and in 1912 only 2,171,503 bushels, due to short crops in the years preceding.

For the first six months of the crop year, July-December, 1920, the exports were: corn, 9,254,614 bushels; wheat, 205,859,000 bushels; oats, 3,363,762 bushels. Now that you have the figures you can draw your own conclusions.

OATS VS. GAS

THE decrease in the cost of feedingstuffs is a potent argument to support the claims of the Horse Association, that on short hauls the horse is the cheapest and most reliable source of motive power. No actual cost figures have ever been presented, so far as we know, that show anything else, but a great many men have been hypnotized by glib auto-truck salesmen and have invested in trucks for short hauls and in congested districts only to find to their sorrow that their hauling costs were increased from 30 to 50 per cent.

With feed and gasoline prices at present levels, any power purchaser will need a great deal of convincing that the truck can be operated more economically, and he will not be stampeded into wasting his money, as so many have been in the past.

On long hauls the case is quite different. Here the motor truck does not compete with the horse, but with the railroads, and the basis of comparison includes many factors with which the horse is not concerned. Before giving up old dobbin on your short haul business consult someone who has had experience with trucks.

USING HEAVY ARTILLERY TO KILL FLIES

GRAIN is a surplus crop in this country, so that the price is made on the basis of world demand. If England or France offers \$2 for wheat and Argentine is willing to accept the terms, we can sell our surplus only by meeting Argentine's price. That fixes the price at home. Congressman Tincher has a bill which fixes a specific tariff of 35 cents on wheat, to keep out Canadian grain. Canada is also an exporting country and must meet the world price just as we do. The only reason the Dominion grain can be sold here is because there is a difference in exchange of 10 per cent or more. This, of course, is a temporary condition and will soon disappear.

If Mr. Tincher's bill passes, it means that American consumers will have to pay 35 cents a bushel, or \$1.57½ per barrel, more for all the wheat or flour consumed than is paid by consumers in other parts of the world. More farm machinery is used in this country than elsewhere and more grain is produced per man per acre than in any other country. Our marketing system is the most efficient and the

spread between producer and consumer less than in any surplus country. Then why should the farmers have to be subsidized permanently by the American people? Evidently a great many people forget that we are passing through a readjustment period which means losses to all producers, but which will be of short duration. There is no need of legislation, in fact new laws are sure to derange the economic processes and to postpone indefinitely the final equilibrium.

Furthermore, such promiscuous tariff laws at this time will affect our trade relations with many countries. Tariff revision will have to be considered in one piece, with due consideration for all raw and manufactured products. A policy of log rolling would be ruinous. If, after due consideration, it is found that grain needs protection more than other commodities, let us have that protection, but grain cannot be considered alone in the matter without injustice to others. America is a part of the world; it must meet world conditions. We cannot isolate ourselves if we would, nor can we move to Mars until the world settles its affairs.

COUNTING OUR BLESSINGS

IMPROVEMENTS come so gradually that we scarcely note their coming or, once arrived, that they have not always been with us. For instance, it is many years since the average farmer had the hauling problem that the producer in Argentina has to contend with.

In Argentina grain is hauled to railroad sidings in large carts usually drawn by six teams of horses. The rates established by carters for this work are \$1.40 per ton for three miles; \$1.95 for six miles; \$2.38 for nine miles; and \$3.40 per ton for 15 miles. If the farmer is located 25 miles from the railroad, which is not unusual, it costs as much to get his grain to the cars as it does to transport it 6,000 miles from Buenos Aires to New York.

The Department of Agriculture states that hauling grain over average roads in this country by motor truck costs 15 cents per ton mile, or \$2.25 for a 15-mile haul, as against \$3.40 in Argentine. The farmer thus saves \$1.15 per ton on his grain and makes that much more clear profit than he used to, even at the same price to the elevator. In like manner he saves in proportion with every piece of machine equipment he uses, so that his net profit is a much more substantial reality than it used to be. And yet one rarely hears a farmer counting his blessings or giving thanks that things are not as they were.

CORN GROWING IN ENGLAND

NOT so very many years ago it was hard to persuade the average English farmer that corn was fit for hog feed, to say nothing of his own table, but since that time English millers have used enough corn flour in their mixtures to become convinced that it isn't absolutely worthless, and stock raisers have used considerable quantities to advantage as feed.

And now, after some years of experimenting, R. C. Punnett recommends corn as one

of the most suitable feeding grains the small farmer in England could produce. Mr. Punnett took up corn growing in 1914, following tests by Professor Biffen of Cambridge University. By seed selection he has raised the yield to 61 bushels per acre for an early maturing white variety, and this would be a paying crop anywhere.

A more favorable acquaintance with corn in the British Isles would probably create a considerably increased demand for American grain, even though it became a recognized English crop. We know from experience that it cannot be surpassed as a carbohydrate for hogs or cattle.

HEAT DAMAGES MILL FEED

DEALERS who make a practice of handling mill feed in car lots, have more complaint this year than ever before on cars going bad in transit due to heating. Many cars have been a practical loss, and mills are loath to make adjustments when the bran or shorts left the plant in good condition, as most of them did.

There is no inherent quality in the mill feed this year that would make it deteriorate faster than in other years. Wheat has been milled with no more moisture than usual and the feed in every other respect is perfectly normal. And yet it reaches its destination, caked, heated and sour.

In practically every case the trouble has been excess moisture accumulated en route through defective cars. Many car roofs do not show evidence of leaks except when it is raining, and it is often difficult to make a claim stick on this ground. But this is the cause of most of the trouble and dealers should insist that the mill shipping him feed make as careful inspection of the roof of the car as he does of the floor and sides. By the same token when the dealer ships a car lot his investigation of the condition of the car should include every inch of the roof. Often a water stain will tell the tale.

GOVERNMENT AND BUSINESS

REGARDLESS of their effect on the packing house industry and the coal business, respectively, the Kenyon-Kendrick Bill and the Calder Bill present features of which most business men of the country heartily disapprove. First: It is contrary to all American tradition and sentiment to have the Government interfere with private business, except where private business disobeys the law or endangers the right of individuals or the body politic. Second: It is provided in both bills that a bureau or commission shall prescribe rules and regulations under which that business shall operate. A business might operate under the features of the law as prescribed in the bills, but who could say what rules might be adopted by the commission without any chance of review by Congress, and the rules would automatically become a part of the law. It would result in, not Government regulation, but Government operation.

The National Chamber of Commerce has

filed a brief against these two bills. In commenting on the Live Stock Bill the brief says: "If the Federal Government may exercise a control over a particular industry not classifiable as a public utility such as is here proposed through a Federal Live Stock Commission over the meat packing industry, then, obviously, it is not to be considered as affecting that industry alone, but all other private industries."

In other words, if Congress gets away with it in the packing and coal industries, with the long lines of patronage they would create, they are liable to try it in any or all industries. It is an opening toward a general socialization of industry, and then we would have a new system of government; a new social order. America has been doing pretty well as a democracy for 150 years. In that brief time it has produced the finest race and the richest country the world has known. We love America too well to endanger her very existence with experiments in socialism.

COAL SITUATION HAS HOPEFUL SIGNS

BETWEEN the slackening of industry and the springlike weather the coal business has been as dull as an I. C. C. bulletin, and dealers are well stocked, as a rule, for all immediate requirements. There are indications, however, that an improvement will be noted in the near future.

Manufacturing is slowly recovering from the winter depression and many plants are resuming operations or increasing their running time. It will be a slow process to get back into normal production again, but business leaders in all parts of the country are confident that the corner has been turned and that convalescence is beginning. This will stimulate the demand for steam coal, and even a moderately cold snap will see a material improvement in the domestic coal situation.

In the meantime mining operations have been reduced to a 50 to 60 per cent basis, so there will probably be no really burdensome accumulations. With such a stagnant market it is difficult to arouse interest in future business, but if we can judge from past experience, next winter will be severe and the coal business will witness one of its most prosperous years. It is not amiss, therefore, to call attention to the coal bins. See that they are in shape to stand a season of activity; and don't overlook any spring bargains in preparing for next season's supply.

The Bureau of Markets in a recent bulletin points out that when the ratio between hogs and corn is greater than 10 to 1, the tendency in the past has been for the corn price to rise rather than for the hog price to decline. At the present time, with cash corn at around 60, Chicago, and hogs around \$9, the ratio is 15 to 1. The Bureau, however, is at pains to explain that this normal price movement may not work this year. At the same time there are two other facts to bear in mind: Corn is usually worth about twice as much as oats; and the old saying, "Beware the tail end of a big crop."

EDITORIAL MENTION

Wheat on the farm is about the best bet the farmer has at present.

At the present time there is danger of green bugs. The only thing more dangerous is a needless green bug scare.

Loaning farmers money to hold their crops will not avail anything unless a demand is created sufficient to raise prices.

Will our new Congress go to Washington loaded down with new legislation to be enacted, or does it realize that the business of the country has had about all the legislation it can digest?

Hundreds of elevators are reported empty of grain,—an unusual opportunity to clean house and fumigate, against the time the conditions of roads and markets start grain from the farms.

The moral hazard on insured buildings and stock has increased materially in the past few months. No one but a fool, however, would lessen his watchfulness even if he is insured for more than present value.

Our wheat exports up to January 1 were 205,859,000 bushels. This, with orders not yet filled, puts our wheat supply on a strictly domestic basis. The prevailing premium for cash wheat, therefore, is the thing that needs watching.

Crop killers are numerous as raisins in a damp pantry this year. Hessian fly, green bug and grasshoppers have already claimed their attention, but in spite of their efforts it looks as though the fall grains were making record progress.

Several of the grain growing states have laws under discussion providing for more or less drastic regulation of grain exchanges. Probably one or more will be passed, so we can gain first hand knowledge of the effect of throwing a monkey wrench into the machinery.

The latest report is that Argentine will have 184,000,000 bushels of wheat this year. Freight rates are about 10 shillings (normally about \$2.35) per ton less from New York than from Buenos Aires to Liverpool. We expect and hope that Europe will get a fair share of its supplies from the Southern Hemisphere for the next few months. We have none too much to spare.

The National Association of Wheat Growers met in Chicago last week and announced that the middlemen handling grain would have to be eliminated. This is in line with the recent declaration of Dr. E. F. Ladd who is one of the Committee of 17. He stated at a cooperative meeting in Montana that wheat growers will have their cooperative elevators in the country and at terminals and

that the Government would build export elevators for them, so that the farmer would control the grain movement in its entirety. No doubt Mr. Ladd thinks this system will eliminate all expense between producer and consumer.

The newest dust explosion reported by the Bureau of Chemistry is of fish meal dust in a fertilizer plant. Some day the danger of dust explosion will be appreciated and elevators and other plants will take care of the hazard even though it costs something to do so.

The Committee of Seventeen has not yet made its report on the ideal marketing plan which has been the subject of study by the experts of the Farm Bureau Federation. The report has been promised from time to time and no doubt our anxious wait for the perfect system will soon be at an end.

The total value of our farm products last year was \$19,856,000,000. This is about five billion less than the year before, but it was not so long ago that the world took time to stop, look and listen when our total products went above the 10 billion mark. Times change. We talk of billions now like counters in a game of penny ante.

Official figures from Argentine place the wheat crop at 184,000,000 bushels with an exportable surplus of 120,000,000 bushels. Australia estimates its crop at 151,400,000 bushels, with a surplus of 104,000,000 bushels. A total surplus of 224,000,000 bushels from the Southern Hemisphere dispels any fear of world famine. But it is no more than we have already exported.

Canadian immigration figures show that 48,866 Americans, most of them farmers, went to the Dominion last year. Most of these no doubt, disposed of their American farms at inflated values and bought cheap Canadian farms which are probably the best wheat land in the world today. They will be considerably better off than the ones who bought their old farms.

The Department of Agriculture is reported to be making rapid progress in its test at Alexandria, Va., to establish Federal grades for hay. But after the tentative grades are decided upon there will be hearings, then revision of the grades and then more hearings, and finally formal promulgation. If the Federal hay grades are in operation within two years, it will be about all we can expect.

In his testimony before the House Agricultural Committee, Herbert Hoover upheld the grain exchanges and suggestion that manipulation of the market, the most objectionable feature at present, could be eliminated through a voluntary agreement of exchanges to limit the quantity of the commodity which could be handled by any one person or firm in speculation trades. This might work badly with foreign government buying and selling millions of bushels at a

time. But that was the least of the evils Mr. Hoover proposed. He further suggested creating, under the Department of Agriculture, a national marketing board of experts with regulatory powers. With the Department of Agriculture permeated with the co-operative idea, it is easy to see where the "regulations" would lead to, once the Department were given authority.

Signora Olivia Resetti Agresti is in this country in the interest of the International Institute of Agriculture in Rome. She states that the Institute in the near future will inaugurate a weekly world crop reporting service, and that later a daily service will be established. Such a daily report would be of inestimable value if the Institute had some means of checking the reports so as to avoid price propaganda.

We have heard nothing of the proposed grain exchange legislation for several days. After hearing the wealth of expert testimony against the bills, perhaps the Committee on Agriculture has wisely allowed the bills to die a natural death. The hearing gave an unusual opportunity for the presentation of a better plan of merchandising grain, but there was not a constructive suggestion made in all the testimony that was offered.

Governor J. J. Blain of Wisconsin has joined the elect. He is quoted as saying, in a recent speech at Madison, that boards of trade and brokerage houses were: "Main instruments of speculation which should be prohibited or regulated by state or Federal Government," and are important factors "which cause a great breach between the price of commodities paid by the consumer and the price received by producers." When a governor talks like that how can we expect an ordinary man to know better.

Lloyd George is reported to have arranged with Russia to handle the grain crop of that country. According to the private reports from Russia, which are more or less unsatisfactory to be sure, the privilege of handling grain will not be worth much, for most of the farmers or peasants have ceased planting more than enough for their own needs, inasmuch as the so-called Government takes it away from them, giving worthless paper money in exchange. We trust that Mr. George isn't giving valuable trade concessions on the strength of the grain handling privilege.

Aaron Sapiro of California recently told the Tri-state Grain Growers how to make \$25,000,000. Simply get 50 per cent of the wheat growers of the country to market all their wheat through a single agency, or one for each state, and set the price at a figure they considered proper. The supply of wheat in other countries would, of course, have nothing to do with the matter. Mr. Sapiro has the proper get-rich-quick idea. Create a monopoly and then dictate the price. An ancestor of Mr. Sapiro's did it in Egypt some 3,000 years ago, so why shouldn't Aaron?

MARSHALL HALL
St. Louis

NEWS OF THE TERMINAL MARKETS

WM. N. ECKHARDT
Chicago

MUST BE PAID BY BUYER

The Interpretation of Rules Committee of the Kansas City Board of Trade, Kansas City, Mo., recently decided that out inspection on grain ordered for transfer and shipment should be paid by the buyer. The decision received the approval of the Board of Directors.

ELECTION AT TOPEKA

The election of officers on the Topeka Board of Trade, Topeka, Kan., was held recently, resulting in the choice of J. F. Jones of the Golden Belt Grain & Elevator Company for president; S. P. Kramer, of the Topeka Flour Mills, vice-president; C. L. Parker, of the Derby Grain Company, secretary; E. J. Smiley of the Kansas Grain Dealers Association, treasurer.

NEW EXCHANGE OPENED

The first annual meeting of the Sioux Falls Grain Exchange, Sioux Falls, S. D., was held late in January at which rules and by-laws were adopted and the Exchange placed on a working basis. Officers were elected as follows: W. Z. Sharp, president; S. A. Burke, treasurer; E. J. Barry, secretary. Directors: W. Z. Sharp, S. A. Burke, E. J. Barry, L. B. Cusick, W. R. Paul, H. A. Paulea, John McQuillan.

AMENDMENT TO RULES

Secretary H. A. Plumb of the Milwaukee Chamber of Commerce writes us that on January 20, the members adopted an amendment to the rules incorporating into the rule governing acceptance or rejection of grain or seeds by the buyer, a clause providing that when grain or seeds are reported in a heating condition at the time of sale, and on sales of corn of the No. 6 grade or Sample Grade, on account of dampness the buyer must either accept or reject it by 12 o'clock of the next day, except, if it be "plugged" or loaded too high to permit of thorough sampling, the buyer must accept or reject at point of unloading.

SOUTH WILL NEED FEEDS

H. M. Brouse of Brouse-Skidmore Grain Company of Cincinnati, Ohio, who spent some time recently investigating conditions in the South, says substantially as follows: North and South Carolina were particularly stagnated at the close of the year and jobbers, who had previously contracted for two months ahead, were only buying to fill immediate requirements owing to the large amounts on their books which could not be liquidated. The redeeming feature of the situation was the operators of the textile mills were accepting a reduction in wages of 25 per cent, and this, with the low price of cotton, was indicative that the mills, after the first of year would be in full operation. As a further result, the farmers would be able to dispose of their cotton and liquidate a large proportion of their debt to jobbers. In the majority of sections of both North and South Carolina very little of the roughage on the farms was taken care of, owing to the high price anticipated for cotton and this will necessitate a large amount of feed shipped to those states during the coming months.

IT MIGHT HAVE BEEN WORSE!

"War is over. Shock is still felt. It may last for years. World may be burdened with heavy debts and taxes for at least a generation. Europe has always been our chief customer. How can we expect prosperity when Europe is so badly bent financially? During and just after the war she poured

her gold into the United States. Our surplus commodities were sorely needed. Price was a secondary consideration. But the war crisis is over. Europe is increasing her production. Foreign exchange situation forces her to restrict purchases tremendously. Until the exchange situation becomes more normal, we cannot expect a large European demand for our surplus commodities. Money continues tight. It may not sober up materially for some time. Expect a gradual improvement in general conditions. If the improvement should be painfully slow, do not be disappointed. Remember our great war prosperity and do not forget that we are suffering much less than Europe."—C. A. King & Co., Toledo, Ohio. From *Special Market Report of February 11.*

GEORGE S. JACKSON FOR PRESIDENT

The annual meeting of the Baltimore Chamber of Commerce was held February 7 at which retiring president, William H. Hayward, read his an-

GEORGE S. JACKSON
President, Baltimore Chamber of Commerce

nual report to the members, and George S. Jackson, John H. Gildea, Robert Ramsay, Jos. G. Reynolds and J. Carroll Fahey were elected directors. These five new directors, with 10 holdovers, organized on February 9 by electing George S. Jackson, president of the Exchange, Adelbert W. Mears, vice-president, and re-electing James B. Hessong secretary and treasurer.

Mr. Jackson is an ex-president of the Exchange and has served on the Board of Directors and on various committees. He was born in Baltimore, June 30, 1866, and began his career in the grain business with Gill & Fisher in 1880. He became a member of the firm in 1898 and remained with them until 1917 when he withdrew to serve his country in the Great War.

He was made second vice-president of the United States Grain Corporation for the first regional zone embracing Maryland, Virginia, West Virginia, Delaware and the District of Columbia with his headquarters in Baltimore. He served in this capacity until the Grain Corporation went out of existence in June, 1920.

Mr. Jackson was the first president of the North American Grain Exporters Association which included the exporters of both the United States and Canada. He is president of the Baltimore Country

Club and the Green Spring Valley Hunt Club, as well as on the board of the Maryland club and a member of its Executive Committee.

He is a director and member of the Executive Committee of the Mercantile Trust and Deposit Company and a director or other financial institutions. He is also associated with Julius H. Barnes in the late established grain exporting firm of Barnes-Jackson Company, Inc., of Baltimore.

Previous to the war Mr. Jackson was for 20 years a member of the Fifth Regiment, Maryland National Guards, and rose to the rank of captain. He has always been prominent in the financial activities of Baltimore and has long been one of its leading citizens.

COMMERCIAL EXCHANGE HOLDS ELECTION

The annual election on the Philadelphia Commercial Exchange, Philadelphia, Pa., held recently, resulted as follows: C. Herbert Bell, president; Horace Kolb, vice-president; Emanuel H. Price, treasurer. Directors: William H. Richardson, Hubert J. Horan, Albert L. Hood, William J. Radon, Louis G. Graff and F. Marion Hall. Ambrose B. Clemmer was reappointed secretary and Lorenzo J. Riley, assistant secretary.

H. M. BROUSE HEADS CINCINNATI EXCHANGE

At the annual meeting and dinner of the Cincinnati Grain and Hay Exchange held in January, the following directors were chosen for a three year terms: Henry M. Brouse, F. B. Edwards, B. H. Wess, C. S. Maguire, W. A. Van Horn, Ralph Gray.

At the reorganization of the directors the following officers were elected to serve the Exchange the coming year: Henry M. Brouse, president; John DeMolet, first vice-president; R. S. Fitzgerald, second vice-president; B. H. Wess, treasurer; Elmer H. Heile, secretary. B. J. Drummond was reappointed executive secretary.

ACTIVITY AT PORTLAND, MAINE

We are in receipt of a letter from George F. Feeney, traffic manager and assistant secretary of the Chamber of Commerce of Portland, Maine—"America's Sunrise Gateway"—which we believe will be of interest to our readers. Mr. Feeney said in part:

"In regard to the commercial outlook at Portland insofar as it relates to foreign commerce we believe that in view of the prevailing conditions, the port of Portland is receiving a fair share of the overseas traffic. It might be interesting to know that at the present time the grain elevators of the Grand Trunk Railway System are filled to their capacity (2,500,000 bushels) and there are at present in the Grand Trunk Storage yards 1,100 cars of grain, and between here and Montreal we understand there are over 700 cars on siding awaiting movement to this port. As a rule the movement of foreign shipments through the port of Portland ceases about the middle of May of each year, or, in other words, when the St. Lawrence River is open to navigation. The export movement that moves through the port of Portland throughout the winter season is handled through the former port. It is our understanding that there is in prospect a heavy overseas movement of American corn and from present indications this traffic will find its way through the port of Portland well up into the month of August. It is recognized by western grain shippers that this port is the logical grain shipping port on the North Atlantic and through a campaign of education that we are planning, we believe it is

only a question of time when this port will be utilized throughout the entire year, not only to handle the grain movement, but other export commodities as well. The following table shows the receipts and shipments of grain from Portland during the year ending December 31, 1920:

	Receipts, Bushels	Shipments, Bushels
Wheat	13,540,615	12,422,190
Corn	725,870	806,812
Rye	2,463,150	2,585,131
Barley	1,262,868	1,458,044
Oats	839,001	924,109
Buckwheat	2,674	.....
Total	18,834,178	18,196,286

"The officers of the Portland Chamber of Commerce are as follows: President, Alexander T. Laughlin; first vice-president, George F. West; treasurer, Herbert A. Harmon; executive secretary, E. H. McDonald; publicity secretary, Frank B. Cummings."

TWO SOUTHERN COLLEENS

Never start anything with W. R. McQuillan, head of the grain and hay firm of W. R. McQuillan Company of Cincinnati, Ohio, about the Irish. For Mr. McQuillan is a man of brawny build, although not so powerful as he once was, and is proud of his nativity. We have therefore refrained from saying anything about the Green Isle thus far in our career, in his presence, from motives of prudence. We are, however, constantly growing in strength and we expect in a few years to express the opinion that we are a better man than an Irishman.

While then, this matter remains in statu quo as to which of us is the better man of the two, we introduce two members of the W. R. McQuillan



MISSSES IRENE AND HAZEL McQUILLAN

Company who are not only expert grain women but as fair and popular colleens as St. Patrick himself ever bade a cheery "good mornin'" to. They are Miss Hazel McQuillan, vice-president of the company, and Miss Irene McQuillan, secretary and treasurer, and both the daughters of Mr. McQuillan.

The two young women are to the manor born as it were, for their father has been associated his entire life time with the grain and hay business and was an attendant at Illinois grain meetings in the time of Bart Tyler, during the presidency of men like E. R. Ulrich, Jr., and was one of the leaders with Jack Howard and others, in the social part of these early gatherings. Miss Hazel and Miss Irene are graduates of Notre Dame Trinity College, Washington, D. C., and took a post graduate course in the Columbian University at New York City. Miss Hazel McQuillan, previous to entering into the company with her father, spent a couple of years on the *Cincinnati Enquirer* in an editorial and news capacity. She finds, however, that the grain and hay industry offers broader scope to the growth of ones business faculties.

Last and not least, both Miss Irene and Miss Hazel are young women of great charm, and are living expressions that any enterprise may be

strengthened and fostered through its association with bright, winsome womanhood of ambition and energy.

A MOUNTAIN TRAFFIC EXPERT

C. B. Rader has just completed his first annual report as secretary and traffic commissioner of the Denver Grain Exchange Association. Although still a young man, he has fully demonstrated his value to the organization.

Before going to Denver in his present capacity, Mr. Rader was employed at St. Louis, Mo., in the



C. B. RADER

freight traffic department of the Mobile Ohio Railroad in the capacity of executive clerk, compiling tariffs and handling matters pertaining to rate adjustments. In this position he obtained a wide experience with freight adjustments all over the country. Prior to this he had considerable experience in the transportation and operating departments of the Louisville & Nashville Railway.

The Denver Grain Exchange Association was in need of an experienced rate man to look after the transportation matters of the members, and particularly to secure equitable freight rates to and from Denver, and on September 1, last, Mr. Rader was secured in the double capacity, being well qualified for both positions. No doubt we shall hear more from Mr. Rader in the future.

ATLANTA EXCHANGE ELECTS OFFICERS

J. R. Bachman of the Atlanta Milling Company was recently elected head of the Atlanta Commercial Exchange, Atlanta, Ga., for the coming year. E. A. Naman was elected first vice-president; Samuel Martin, second vice-president; J. H. Taylor, third vice-president; H. E. Watkins, treasurer and J. Hope Tigner, secretary and superintendent.

Directors chosen were T. J. Brooke, Jos. Gregg, W. A. Gilreath, J. R. Ellis, J. J. Williamson, Robert A. Smythe, Geo. C. Speir, P. R. Lamar, Henry Hilbraith, E. P. McBurney, Lee M. Jordan, Samuel Martin, F. M. Inman, J. H. Taylor, Lee Ashcraft.

MOVEMENT WILL INCREASE

Receipts of corn here have been light recently and values are keeping in line with ruling prices in other markets. However, the demand for this cereal does not seem to be very active, on account of the fact the biggest portion of the industries are still closed down. Most of the arrivals here for some time past have been worked for shipment East, some domestic and some export. The weather the past week has been very unfavorable for the movement of grain. Country roads are almost impassable. No doubt, with good seasonable weather, the movement of this cereal would increase materially.

Oats receipts have been light and market conditions are dull. There seems to be very little demand

for this cereal either from the East or the South. On the other hand, the country is not selling freely, notwithstanding the fact that stocks are large.—*Mueller Grain Company, Peoria, Ill. Market Letter of February 12.*

CHANGES IN MEMBERSHIP

Chicago.—New members on the Chicago Board of Trade are: John Francis Barrett, Henry M. Ferguson, Chas. P. Squire, Harry N. Bell, Thos. J. Brodnax, Raymond P. Olesen and H. B. Stephens. The memberships of the following have been transferred: E. Rothschild, C. W. L. Kassuba, N. L. Carpenter, Stephen A. Burke, Est. of W. S. Rosenbaum, James M. Smith and Charles G. Ellis. Reported by Secretary John R. Mauff.

Milwaukee.—Adolph C. Peters, Frank A. Batzner and Arthur D. Gutheil were elected to membership in the Chamber of Commerce. The memberships of L. S. Greenwood, Cyrus C. Lewis and Hugo Stolley, Additional Certificate, were transferred. Reported by Secretary H. A. Plumb.

TERMINAL NOTES

The Norris Grain Company of Toronto, Ontario, has increased its capital stock from \$150,000 to \$500,000.

S. J. McCaull of the McCaull-Dinsmore Company of Minneapolis, Minn., returned recently from a vacation spent in California.

The capital stock of the Rocky Mountain Elevator Company of Minneapolis, Minn., has been increased from \$300,000 to \$600,000.

E. G. Cool of E. G. Cool Grain Company, Des Moines, Iowa, is now handling the account of Taylor & Bournique Company of Milwaukee, Wis., in Iowa territory.

The Godfrey Grain Company of Minneapolis, Minn., recently filed a petition in bankruptcy. Edwin W. Stuhr of the Brown Grain Company was appointed receiver.

Bartlett Frazier Company of Chicago, Ill., has established a new grain office at Fairmont, Minn. W. S. Treadway, recently of the company's Minneapolis office, is in charge.

The Barnes-Piazzek Company, Inc., of Kansas City, Mo., has opened an office at St. Joseph, Mo., under the management of D. H. Henley. The office is at No. 1015 Corby-Forsee Building.

Nye, Jenks & Co., after 30 years in the grain business at Minneapolis, Minn., have sold their Calumet Elevator to the Itasca Elevator Company of Duluth and have gone out of business.

At a recent special election on the Duluth Board of Trade, W. W. Bradbury was elected a director to fill the vacancy caused by the resignation of G. H. Spencer who became vice-president.

Cisneros & Co., grain and flour brokers of the Produce Exchange, New York City, filed a petition in bankruptcy recently with liabilities of \$112,326, of which \$11,083 are secured claims, and assets of \$15,769.

Former president Leslie F. Gates of the Chicago Board of Trade and member of Lamson Bros. & Co., was presented with a handsome platinum watch and chain recently on his return from a month's stay at Washington where he represented the in-

'TWIXT THE CUP AND THE LIP



—From J. F. Zahm & Co.'s Red Letter

terests of the grain exchanges during the Congressional investigation. Mr. Gates has been very active during the past two years in his work for the Board of Trade.

L. L. Quinby has purchased the interest of W. E. Emelund in the Mid-West Grain Company of Omaha, Neb., and is now president of the company while J. C. Ackerman is vice-president and treasurer.

At the annual meeting of the Kansas City Grain Club, Kansas City, Mo., the following officers were elected: James N. Russell, president; Fred Lake, vice-president; J. Rahm, secretary and treasurer.

A recent announcement from New York states that Edward M. Flesh, Julius Barnes and Herbert Hoover will form a company to take over several industrial enterprises dealing with so-called waste products.

The Minneapolis Chamber of Commerce followed the action of the Chicago Board of Trade and other Exchanges in forbidding the publication of Argentine quotations until they could be relied upon to represent true conditions there.

Raymond P. Lipe and Jesse W. Young, two of Toledo's popular grain merchants, departed on a trip to South America late in January. They were bade Godspeed by their grain friends in a dinner at the Toledo Club before taking their departure.

The Co-operative Farmers' Terminal Company has been organized at Minneapolis, Minn., to act as a selling agency for grain, grain products, seeds and hay, operating in the states of North and South Dakota, Wisconsin, Minnesota and Montana.

President Jos. P. Griffin of the Chicago Board of Trade, recently sent a special letter to each member of the Building Committee, urging them to hasten action on a new home for the Chicago Board of Trade. It is estimated the new building will cost about \$6,000,000.

J. L. Frederick, formerly of the J. L. Frederick Grain Company of St. Louis, Mo., is now representing E. F. Leland of Chicago in Western territory. The company continues in business under the old name with Ed. H. Hasenwinkle, manager, and W. R. Spiers, secretary and treasurer.

The Wichita Board of Trade moved into its new building late in January. It is known as the Wheeler-Kelly-Haguy Building and the Board occupies the entire seventh floor. The trading floor is 81x35 feet and everything is arranged for the convenience of the members of this growing market.

At a special election held early in February the members of the St. Louis Merchants Exchange voted against authorizing the Board of Directors to expend \$12,000 during 1921 for the purpose of advertising the St. Louis grain market in Missouri, Iowa, Illinois, Kentucky, Arkansas, Alabama and Georgia.

The Swan Grain Company is now located in new offices in the Board of Trade Building, Indianapolis, Ind. A. S. Swanson, formerly connected with the Sawers Grain Company of Indianapolis is manager of the company, and one of the members is H. M. Freeman who has operated grain elevators at a number of Indiana stations.

The C. V. Fisher Grain Company of Kansas City, Mo., filed a petition of voluntary bankruptcy in the United States District Court early in February. It is stated that the margin of failure is so small that creditors will meet with no great loss. It was given out that inability to make collections and unsettled market conditions caused the failure.

Jos. P. Griffin, president of the Chicago Board of Trade, started a movement early in February to eliminate Argentine quotations on wheat as a factor in American markets on the grounds that such purported quotations do not intelligently reflect the supply and demand situation of Argentine but were prices made through the medium of controlled markets.

The Board of Trade Fellowship Club of the Chicago Board of Trade held its annual meeting early in February, electing Wm. J. O'Brien, president, George Morris, vice-president, Wm. H. Fenton, secretary and treasurer. It is the intention of the

officers to revive the practice of holding special social events and discussions such as were held before the war.

INSURING AGAINST LOADING DELAY

Many elevators have experienced the annoyance and expense of a leak in an elevator spout on a busy day, and the announcement of an insurance against that leak will be welcomed by every one of them.

The Burrell Manufacturing & Supply House, of Kankakee, Ill., has stepped into the breach with



THE KANKAKEE SPOUT PATCH

the Kankakee Spout Patch which can be adjusted instantly, even while grain is flowing through the spout, and which, to every intent and purpose, makes a new section for the spout.

The patch makes it unnecessary to take down the spout for repairs when it leaks; it is durable, inexpensive, and may often save replacement two or

every elevator to have a few of these spouts on hand, for it is in an emergency that they are most useful and when the emergency comes it is too late to order to take care of that particular leak.

WHEAT WEIGHTS PER BUSHEL

The weight of wheat per measured bushel is not a safe basis of comparison as between wheat growing localities; but it is nevertheless of importance for other comparisons and the U. S. Department of Agriculture keeps a record from year to year of states. The wheat crop of 1920, Spring and Winter, weighed 57.4 pounds per measured bushel against 56.3 pounds in 1919, and a 10-year average of 58 pounds for the entire country.

Delaware wheat had the highest record last year, or 60 pounds per measured bushel; Utah was next, with 59.9 per bushel. New York, New Jersey, Pennsylvania, Maryland, Virginia, West Virginia and North Carolina all reached the 59-pound limit, as did Idaho, Wyoming, Colorado and Oregon. Kansas also had 59 pound wheat.

South Dakota had the lowest weight per measured bushel, or 49.5 pounds. Minnesota came next with 54.1 pounds; Wisconsin with 54.5 and North Dakota with 55 pounds.

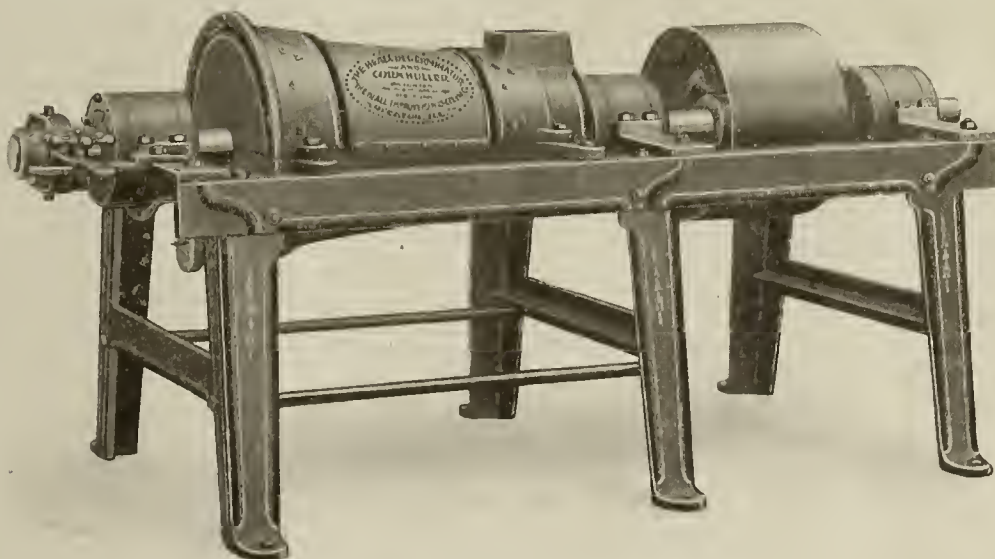
Of the Central Milling States, Ohio wheat weighed 58.5 pounds; Indiana, 57 pounds; Illinois, 57.5 pounds; Missouri, 58 pounds; and Nebraska, 57.1; Kentucky, 57.2 and Tennessee, 57 pounds. Oklahoma wheat weighed 58 pounds and Texas wheat 56.5 pounds.

In the 10-year average, Utah wheat comes first with 60.6 pounds per measured bushel. The other states rank in the 10-year average pretty much the same as they did in 1920. The heaviest wheats are in the Central Eastern and Mountain States.

THE BEALL DEGERMINATOR AND CORN HULLER

The business of the grain elevator, the flour mill and corn mill so overlaps today that that which is interesting to one, carries more or less interest to the others and the Beall Improvements Company of Decatur, Ill., in its late catalog, presents a number of machines with which operators of grain and milling plants should become familiar. One of the leaders of these machines is the Beall Degerminator and Corn Huller which is shown in the accompanying illustration.

It is said the Beall Degerminator makes finer corn goods at less expense than is possible with other degerminators because it makes less feed, costs less to keep in repair and saves a good deal of power. It runs cool and does not choke down or have hot boxes. If the stock should back up to



THE BEALL DEGERMINATOR AND CORN HULLER

three times, for it frequently happens that one section of a spout will have a flaw or weakness of which the maker himself may be quite unaware. The patch does not interfere with the flexibility of the spout and is made of No. 16 galvanized steel, 12 inches long and one half the diameter of the spout.

The saving that can be effected can be readily appreciated and it would be an excellent policy for

it from the spout underneath, the operator can throw it wide open instantly and prevent it choking down.

The machine is made entirely of iron and steel and is unusually rigid and durable. The cone roll is made of chilled iron and will wear for a long time. The shell around the cone roll and cylinder is divided into sections or plates, some having perforations to permit the escape of the finer material,

any one of which is easily removed when worn and a new one substituted.

The Beall Degerminator is made of few parts and its simplicity and lack of running parts has made it highly satisfactory to experienced corn millers. The construction is such that a large or small amount of corn will pass through it with equal ease. This prevents intense friction, saves a good deal of power and gives long life to the machine.

COMMUNICATED

NEWS FROM OKLAHOMA

Editor American Grain Trade:—Recent freezes over the grain belt of Oklahoma probably have forestalled any considerable damage by the green bug, but these followed a long season of warm weather favorable for the propagation of that damaging insect. While no green bugs have actually been found in Oklahoma wheat, so far as reports have shown, they are known to have shown in northern Texas. Following a report of this received by local millers, a federal statistician made an investigation of the Oklahoma grain region and early in the month he reported no bugs were found.

While millers remain reticent as to the future, making no important forecasts, they undoubtedly are considerably more optimistic than a few weeks ago. Quite a number of mills that were idle during part of December and January have resumed operations, some of them on full time. This was brought about in part by a wheat movement in January that lasted until a sharp decline in prices drove growers off the market.

Lately the wheat movement has been very limited, the only demand being from Gulf Coast points. There has been virtually nothing doing in corn and oats, and grain dealers are wondering at the low demand for seed oats in Southern and South-eastern States which usually are heavy buyers early in the year. The controversy with reference to South American production and alleged market control and manipulation has been disturbing.

A first-hand investigation of conditions in Central and South America is being made by several Oklahoma millers. One of the latest to depart for those countries was H. A. Kroutil, general manager of the Yukon Mill & Grain Company, who has included Mexico in his itinerary. He expects to be absent two months or more and will study crop conditions, milling requirements, and matters relating to intercourse between the United States and those countries.

Mexico is attracting considerable attention. A number of grain and milling men of Oklahoma already are in that country. Some of them were attracted by reports of an agricultural uplift and the promise of an early revival of transportation facilities within the republic. Any number of colonization enterprises, projected by Americans, are under way, with the outlook that next year Mexico will have the largest grain crop in its history. Mexico for years has imported virtually all its grain, and largely from the United States.

The outlook in that country has attracted representatives of milling concerns. It is reported that those selling mill equipment are making a minute study of conditions. A Monterey grain dealer has reported to an Oklahoma City agent of American mill machinery that he has over \$500,000 worth of grain in storage. Since it is a custom of Mexican millers to operate baking departments this man headed directly for the City of Mexico with a view of establishing there the largest baking plant in the republic.

The Mexican situation is absorbing, for colonization companies are seeking to take good American farmers into that country, and they have selected the most fertile regions obtainable. It has become a slogan among them that Mexico must feed herself, and they are advertising the possibilities of manufacturing plants and of exportation of products to the United States and European nations.

A resolution opposing the appointment of Herbert Hoover to a cabinet position under the Harding ad-

ministration, or to any other position the duties of which touch agriculture, was adopted by the Farmers Cooperative Grain Dealers Association which held its annual meeting at Oklahoma City in January. Mr. Hoover was roundly criticized in the resolution for giving American farmers bad advice. They lost millions and millions of dollars, the resolution said, because they followed his advice to plant more wheat and corn and raise more cattle, hogs and wool.

Other important items in the resolution asked for readjustment of freight rates held discriminatory against grain shippers, the establishment by the boards of directors of a school in Oklahoma City for managers of farmers cooperative elevators, and the passage of the Cummins Bill by Congress providing for a world reporting bureau on farm products. The association endorsed a project of the Oklahoma Farmers Union to establish a central buying and selling agency for farm products in Oklahoma City. Leading members of it attending a banquet given by the Oklahoma City Grain Exchange, endorsed the project of the Oklahoma Terminal Elevator Company to establish there a plant of 1,250,000 bushels capacity and a bonded warehouse.

Officials of the Terminal company announce that about \$200,000 of the company's \$750,000 of stock has been sold and that a site has been secured in the packingtown district. Construction is to begin in early summer, they say.

It appeared early in February that the bill being discussed in the Legislature making an appropriation of \$2,000,000 to build state warehouses for farm products would not pass. In event of its passage, however, grain and mill men do not believe it would have the approval of Governor Robertson, who has openly declared he was against the appropriation but in favor of a law that would permit counties to issue bonds for warehouse purposes. Some lawyers have contended that the measure is unconstitutional. There is no doubt that both mill and grain men are in favor of some sort of a warehouse measure. It is not being opposed even by the concern that purposes to establish here a large bonded warehouse.

Another bill receiving attention of mill and grain men is that providing that mills and grain elevators shall be declared public utilities and their regulation placed in the hands of the Corporation Com-

mission. The fraternity is making a determined fight against this measure, which early in February had not advanced in the committee to the public hearing stage.

The work of inspecting grain and mill products in Oklahoma will be greatly retarded, if not prohibited, should the Legislature fail to make appropriation for that work, and it is by no means certain that such an appropriation will be made, say members of the State Board of Agriculture. Inspection has not been carried on lately as fully as the Board desired because of the lack of funds.

Wheat conditions early in February were reported good, generally speaking, yet continued warm weather had not produced the growth expected. The outlook, however, is for a big crop. That applies also to the Texas Panhandle which had good rains in January. At least a fair crop is assured in that section of the country and the outlook is for a big business. A grain exchange has been established at Amarillo that in January shipped out nearly 300 cars of grain. Wheat shipping records shown in statistics compiled by counties show that last year's crop was considerably above normal. Another good wheat crop will make the third in succession there and the Panhandle will be more prosperous than for many years.

The buying of mill machinery and supplies in Southwestern States has been disappointing, local agents of equipment firms say. It is due, naturally, to general business depression. Business has been fair in the sale of repairs, shelling mills and small crushing plants. In general, it promises to be below the bad enough record of 1920, and far below the record of the years immediately before the war.

Rate conferences for February are absorbing to the milling and grain trade. Individual shippers are asked by traffic organizations to file whatever complaints they may have to make. A committee representing traffic associations, shippers and the Corporation Commission are considering the whole matter of rates to make recommendation to the Commission before that body acts on application of railroads to renew an order making a 35 per cent increase valid for six months. That period has nearly expired. Another case, affecting grain rates exclusively, is before the Interstate Commerce Commission.

Yours truly,

W. F. KERR,
Oklahoma City, Okla.

TRADE NOTES

The Burrell Manufacturing and Supply House of Kankakee, Ill., has published a catalog for 1920-21 which will prove useful as a reference book on any grain man's desk. The book lists grain elevator supplies and specialties, besides concrete working machinery and farm specialties and supplies.

The sixth annual meeting of the National Scale Men's Association will be held in the Auditorium Hotel, Chicago, Ill., March 15, 16 and 17, 1921. An excellent program has been prepared and the Executive Committee of the Association is arranging for a large attendance. The delegates will be welcomed by Jos. P. Griffin, president of the Chicago Board of Trade.

The Globe Machinery & Supply Company of Des Moines, Iowa, in closing their year's business on the Globe Combination Auto Truck and Wagon Dump, for 1920, reports a 1,000 per cent increase over the business of the year 1919. The dump was placed on the market early in 1919 and made phenomenal growth as to sales record. It has been sold in every state in the Union and left satisfied users everywhere.

H. W. Streeter is now associated with the grain elevator and flour mill machinery department of Nordyke & Marmon Company of Indianapolis, Ind. Mr. Streeter is a milling engineer of experience and ability, qualified in every way to cope with the larger problems that arise in the building of the

high-grade modern mills and grain elevators. He was introduced in Chicago recently by J. N. Adler, Chicago representative of the Invincible Grain Cleaner Company of Silver Creek, N. Y.

The Western Grain Dealers Mutual Fire Insurance Company of Des Moines, Iowa, makes a very excellent showing in its financial statement of January 1, 1920, to December 31, 1920. It shows insurance in force January 1, 1920, of \$16,969,607 and insurance written in 1920 of \$24,491,429.10, making a total of \$41,461,036.10. Subtracting the insurance cancelled and expired, left a total insurance in force December 31, 1920, of \$17,735,196. Admitted assets amounted to \$233,812.17 and re-insurance reserve \$90,185.20, leaving a surplus over legal reserve of \$143,626.97. At the recent annual meeting of the company held at Des Moines, officers were re-elected as follows: President, Jay A. King, Des Moines; vice-president, S. W. Wilder, Cedar Rapids; treasurer M. E. DeWolf, Spencer; secretary, Geo. A. Wells, Des Moines.

At the annual election of officers of the Concrete Mixer Association of the United States recently held in Chicago, Clifford F. Messinger, general sales manager of Chain Belt Company, Milwaukee, Wis., was elected president for the coming year. W. B. Knickerbocker of the Knickerbocker Company, Jackson, Mich., was elected vice-president. A. T. Scannell of the Archer Iron Works, Chicago,

Ill., was elected treasurer. H. E. Smith, president of the T. L. Smith Company, Milwaukee, Wis., was made chairman of the Executive Committee, while P. A. Koehring, secretary of the Koehring Machine Company, Milwaukee, Wis., and Z. W. Carter, sales director, of the Austin Machinery Cor-

poration, Chicago, Ill., were elected members of the same committee. The installation of officers took place at a dinner given by the Association at the Atlantic Hotel, Chicago, on Friday evening, January 28. Appropriate ceremonies and speeches ushered the new officials into office.

The effect of the fact of gambling intent in the mind of the customer upon the status of the broker is developed. Whether the common law makes it a duty of the broker to ascertain that his customer is not gambling is a question not yet decided by the courts. It is at least true that the broker has not the right to ignore circumstances and methods of his customer that are indicative of gambling intent. The special legal responsibility of the broker and his possible moral obligation to abstain from speculative risks are duly noted.

No Effective Remedies for Corners

One of the most important topics in connection with future trading as viewed from the standpoint of the law is that of corners. Manipulation of prices by way of corners is discussed with reference to the state of the law on this subject. Though the evil is specific and is a peculiar result of future trading technique, effective remedies for corners are not found in the present law; at least as it is actually enforced.

In the present report on the grain trade the commission draws no conclusions and makes no recommendations. It merely sets forth the facts found as to the processes and methods of future trading. The general economic result will be considered in a later volume on the basis of comprehensive statistical data, where also will be considered remedies for economic ills that are amenable to legislative or administrative correction.

ROT DISEASES OF CORN

Handling corn is a large part of the business of hundreds of country elevators. A disease which destroys 125,175,000 bushels of corn in a single year must be of some interest. That is what the root, stalk, and ear rot diseases did in 1919, according to estimates of the Department of Agriculture. It is believed that the total losses from rot diseases sometimes equal 10 per cent of the crop.

Certain bacteria and fungi are found present in rot diseases; just what part each one plays has not been fully determined. Sometimes the injuries are confined to the root, in other cases the same organisms affect the stalks and ears as well. One of the fungi mentioned, *Gibberella saubinetii*, is that which causes wheat blight or scab.

The rot diseases may attack corn at any stage in its development, but usually the organisms enter the base of the stalk when the plant is young and tender. The symptoms of the disease are well defined. When young plants are affected they usually die young or become spindly, making a poor stand. If they grow they are late in ripening or may be barren. Often the ear shanks are broken or discolored. The ear may look all right, but the kernels are unnaturally rough, shrunken, or starchy, or rather dull in color.

The best way of control is in seed selection. The fact that some diseased ears develop is what constitutes the chief danger. In selecting seed it is best to take only matured ears of medium size from upright plants whose stalks and portions of the leaves are still green, and whose ears are supported at a convenient height on strong, sound shanks. The germinator usually tells the story if the appearance does not.

Details of the disease and its control has just been issued by the Department of Agriculture as Farmers Bulletin 1176, which may be obtained free from the Department.

MILL PRICES FOR WHEAT

The average farm price of wheat reported by the U. S. Department of Agriculture as \$1.44 on December 1 does not represent the prices actually paid in well settled milling territory. Thus, the Ohio Bureau of Markets reported the average price on December 1 in that state as \$1.75. This was for all grades of wheat and represented every section of the state. The November price in Ohio for all sections and all grades was \$1.87. The price in December, 1919, was \$2.08.

The difference in wheat prices was not so large in actuality as one was led to believe it was. In Indiana reports from 25 mills in various parts of the state showed that the December price paid by millers was over \$1.80 per bushel, or more than 35 cents per bushel in excess of the average price reported by the Government for December 1. Flour mills give the best market for wheat and their activity is the most stabilizing price factor.

Further Report on Grain Marketing Federal Trade Commission Submits Other Installments of Voluminous Report on Grain Marketing

The Federal Trade Commission has submitted to Congress further reports on its investigation of grain marketing. Volume II covers "Terminal Markets and Grain Exchanges." It describes the various functions and operations of the grain exchanges but draws no conclusions nor makes recommendations with reference to public regulation.

Volume V covers "Future Trading Operations in Grain," and the letter to Congress, submitted with the report, was as follows:

Future trading is a comparatively modern commercial practice and, as measured by extent and variety of use, is probably more important in the United States than elsewhere. It is especially important as applied to grain trading. The character and uses of the future contract have not hitherto been described with sufficiently specific detail, it is believed, for a proper comprehension of the system. Hence, it has been found necessary to devote the present report to what is essentially a description of future trading operations.

Future Contract Not a Sale

The future contract is not a contract of sale, but an agreement to sell at a future time on specified or understood terms applying to a prospective actual sale. Such an actual sale may or may not occur as a result of the future transaction. Reference to transactions in futures as "sales" and "purchases," however, is in accordance with trade usage and scarcely avoidable, despite its inaccuracy from a legal viewpoint. Payments made at the time of giving an order or of the execution of a future contract are not part payments toward the purchase price, but are merely deposits made to secure the rights of each of the contracting or interested parties. Such "margins" are deposited by the seller as well as by the buyer.

As a matter of fact, the great majority of future contracts are settled before maturity and without any actual sale occurring. In other words, it is only exceptionally that a transfer of grain or payment for grain occurs as a result of future trading, though delivery is necessarily contemplated in a valid future contract. Such contemplated delivery is generally obviated by a subsequent contract, or contracts, which have the effect of canceling the first contract.

The Part "Hedging" Plays

It should be noted that settlement and cancellation of future contracts prior to the time of delivery is essential to the serviceability of the most important of the business uses of the future contract, namely, "hedging." Affording an opportunity for hedging—which is a device to enable a merchant or manufacturer to avoid certain commercial risks—is the principal economic service of future trading. For example, an elevator company on buying 1,000 bushels of actual grain, sells a contract for 1,000 bushels of futures against this cash purchase, expecting to buy in this quantity of futures at the time the actual grain is sold. Any marked change in market or other conditions will affect the prices of actual or cash grain and of contracts for the future delivery of grain substantially alike. If, therefore, the price of the actual grain purchased declines 10 cents between the time of its purchase and the time of its sale by the elevator company, the price of futures will presumably also have declined about 10 cents. As the elevator company when it bought the actual grain also sold a future contract, the company is thus enabled to buy in the same quantity of futures for 10 cents less than it paid for them, thus compensating itself for its 10-cent loss upon the actual grain and leaving it with only its ordinary merchandising margin. Similarly, only the merchandising margin of profits is left if prices go up, though the cash grain be sold for much more than the ordinary excess above the price paid for it.

The point of interest as regards hedging in the present connection is the fact that the hedger will not ordinarily deliver on his future sale. He will probably not wish to hold the grain long enough to reach the delivery month, and furthermore, the grain is likely to be of such a quality that he can get a premium for it in the "sample market" that is not obtainable through delivery on the future. His future contract enables him to avoid speculative risks in price, but does not necessarily involve delivery. It should be noted that a miller similarly hedges by buying futures against flour sales contracts, and that

the miller also seldom wishes to take delivery on his hedges, preferring to buy grain with reference to its adaptation to his particular needs and on the basis of the testing of samples.

The process of settlement by offset is designed to dispose as soon as possible of sales and purchases of the same trader that cancel each other, and also of sales and purchases of different customers of the same commission house that compensate or balance each other at the time and do not involve a net obligation to other houses. Such settlement is accomplished by various types of "clearing."

Considerable effort has been made by the commission to determine the quantity of future trading in grain in the United States. The general results are given here, but significant details will appear in another volume of this report. The quantity of future trading in grain varies considerably from year to year, but for some years has been above 20,000,000,000 bushels. About five-sixths of this trading is done on the Chicago Board of Trade.

In view of the magnitude of this figure, it is evident that most future trades are short lived. They often do not remain "open," in fact, for as much as a day. A "scalper" or professional pit trader operating for his own account may both buy and sell 500,000 bushels in a day and have nothing open at the close of the market because his purchases and sales cancel each other. Another class of traders looks, however, to price changes occurring during a much longer period. The effect of the trading of such a speculator, who may have 5,000,000 bushels or more open for several months, is of a different significance and of much more importance comparatively than might be inferred from the mere number of bushels involved in his transactions.

The point of chief economic interest in connection with the subject of deliveries is not the ratio of deliveries to transactions, which is, of course, small, but that delivery is contemplated as an eventuality and consequently has more or less effect on the production, price and consumption of the commodity dealt in.

Quotations on Futures

Quotations of futures are regarded by the trade as a facility of the utmost importance for the grain business as now conducted. The methods by which they are recorded and distributed are described in this volume. It appears that these methods provide a prompt and wide dissemination of such quotations. With regard to the circulation of news and rumors affecting prices, the situation suggests the need of reforms.

The most important physical facility for future trading consists of the great private wire systems which make it possible to give an order for a future transaction and obtain the report of its execution a thousand or more miles from Chicago in a matter of two or three minutes. These private wire systems are very expensive and are a heavy charge upon the grain trade, and other interests that use them. So far as relating to the grain trade, the systems are designed primarily to serve future traders, though of late used in promoting and serving cash grain business. The facilities offered doubtless tend to encourage speculation, though not exclusively or principally in grain. It is impossible definitely to separate the stock exchange service from the grain trade service of the private wire systems.

Trading on Margin

Speculative trading, as distinguished from investment, is often defined by reference to "margins," and while this is not exact it is not essentially misleading. The margin is both a commercial credit device and a deposit made to secure others interested against loss because of nonperformance of a future contract. The margin deposit in the case of a stock purchase may be in intent and effect a first payment toward an investment, but it is not possible to make an investment in a grain future. The use of futures for hedging, however, involves the same employment of credit and of deposits by way of security as applies to speculative trading.

The subject of the legal status of future trading is naturally approached through some consideration of the nature of gambling and of the question as to how gambling may be distinguished from speculation. The nature of the legal conception of "intent to deliver" is subjected to careful examination and its application developed. Speculative trades can be made with intent to deliver. Bucket-shop deals, however, because they in no case involve intent to deliver, are condemned by the common law, and the bucket-shop evil is also attacked by special prohibitory statutes in most states.

On the legal status of future trading attention is also necessarily called to the fact that speculative exchanges are available as gambling facilities and are so used.

**"FIRE PROOF" PLANTS AND DUST
EXPLOSION**

(Continued from Page 623)

year, showing that the air was very dry. The fore-caster in charge of the local Weather Bureau reported that these extremely dry conditions during the period from September 1 to 15 were unusual for that time of the year.

DAMAGE TO PLANT BY EXPLOSIONS

Building A:—The extent of the explosion was not limited to any one portion of the elevator, but the explosion propagated to all sections and did considerable damage. In the working house, the six-inch concrete walls on the work floor were all blown out. All the reinforced concrete pillars on the east and west sides of the house were either shattered and partially stripped of concrete or blown out. These pillars were 18x24 concrete, reinforced by six one-inch round steel bars. The entire three sides of the shaft containing the stairs, main rope drive, and manlift were blown out. In many places the iron steps on the stairs in this shaft were missing.

The entire four walls of the curtain wall on the "texas" were blown out, with the exception of several points where parts of the wall were still clinging or hanging to the steel framework of the structure. The roof and floors of the "texas" were still intact. The three runways containing the belt conveyors to annex storage houses were demolished. In places the outside edges and roofs of the exterior tanks were blown out. The lower parts of some of these exterior tanks were stripped of outside tile surfacing, and many of the tanks had long noticeable cracks in the sides. Some of the tanks had shifted slightly and some had sheared where butt-welded together. The tops of all the tanks were blown off with the exception of the half section tops in some places around the outside of the "texas."

Both Receiver 4 and Shipper 4, elevator legs on the north side of the elevator, had the return side of the legs blown out. Also Receiver 3 was blown

runways housing the conveyor belts on top of the tanks were completely demolished, but were still clinging in place on the top of the tanks. The edges of the outside tanks were slightly damaged. The walls of the tanks next to the working house and close to the first floor had holes driven into them by pieces of concrete and iron blown out of

**NORTH END OF WORKING FLOOR**

An idea of the volume of the explosion can be gained from the manner in which the concrete columns, heavy walls, and floor above basement were blown out.

the basement and first floor. Much grain ran out of these holes on the ground from the tanks and became damaged.

Tanks C:—These tanks remained intact after the explosions. The conveyor tunnels leading underneath the tanks were blown out at the east end of the tanks causing an upheaval of the ground and tearing asunder of the foundation wall of the tanks. The foundation wall at these points was 16 inches thick, reinforced by steel bars, and banked on the outside by ground piled to the top of the foundation. Several windows in the cupola or top of the tanks were blown out.

Building D:—The fireproof grain dryer was com-

of the building was a mass of twisted sheet iron and the truck of a box car with charred dust.

Building H:—The pump house was completely destroyed by fire.

Building I:—The office remained undamaged by the explosion.

**NOTES OF INTEREST CONCERNING THE
EXPLOSION**

Lying some 300 feet directly north of the plant a large piece of concrete weighing some 1,400 pounds was found. This piece no doubt originally comprised part of the north wall and was blown the distance mentioned. This gives evidence of the great force accompanying the explosion. Other pieces of concrete varying in size from 25 to 1,000 pounds were scattered in the same direction from 50 to 200 feet, while the largest piece found was at the greatest distance from the plant.

On observing one of the tile tanks located directly at the northeast corner of the working floor, a large piece of concrete weighing about 200 pounds was imbedded in the wall of the tank and acted as a plug by not permitting the grain to run out of the tank. Just below this a hole one foot square was blown directly through the tank wall by a piece of concrete and from here the grain ran out on the ground. Other portions of this tank were badly shattered by flying pieces of concrete.

Observation showed that the star bins between the tanks remained intact at the bottom, if the adjoining tanks were filled with grain; but when adjoining tanks were empty, it was generally shown that the star tank exploded with enough violence to puncture the adjoining circular tanks. This showed that a filled bin withstood the force better than an unfilled one.

The roof of the workhouse proper remained intact, although all the side walls from the bin floor up were blown off. It is apparent that the side wall had less resistive force than the roof. Four concrete pillars 16x24 inches reinforced with six 1½-inch steel rods were blown completely out of the west wall of the work house. These rods were cut as clear as if sheared off, and the eight-inch wall between the remaining columns was cut away as if by a chisel. Each column must have weighed some six tons and, reinforced as it was, it should have withstood an enormous pressure, a fact which raises the question as to just how great the pressure was on these side walls in pounds per square inch.

The back walls of the conveyor tunnels were blown out, which were several hundred feet away from the original source of the explosion. They were made of 16-inch concrete and acted as part of the foundation, an illustration showing to some extent the great force manifested at the rear end of the tunnel.

Many water barrels and buckets which were situated on various floors in the corners remained intact. It appears as soon as the force hit the walls they immediately gave away and as a result little damage was done by the force of the explosion to the articles within the house, especially to those situated in the top of the elevator.

Steel hoppers and conveyor rollers within the tunnels were blown off and showed the great force and violence within these tunnels. Between the elevator and annex A the tops of the tunnels were broken open and one tunnel had the entire roof lifted bodily. A conveyor in the top of annex A was burned up completely. This is a peculiar fact in that this was the only belt to burn in annex A and it was located the farthest away. Engineers are of the opinion that the force of the explosion raised the entire plant in most places. Just how far it was lifted is not accounted for—maybe a fraction of an inch, but in making an inspection of the building they concur in this opinion. After the explosion dust was found within the plant which easily would pass through a sieve of 200 mesh. This was a "mouse colored" dust and gives an idea of the fineness of some of the dust which existed within the elevator.

Considerable pressure must have been exerted on the side walls of the buildings. The five columns of the north end of the wall were completely taken out and part of the wall, weighing 1,400 pounds,

**VIEW OF NORTHWESTERN PORTION OF THE PLANT**
Destruction of working shed and railroad cars is shown at the right

out on the return leg. All machinery on the working floor was completely wrecked. The working shed was completely destroyed together with 10 or 12 cars filled with grain on the track under the shed. Number 2 Scale, counting from the north end of the elevator, was blown out vertically above Receiver Leg No. 3. All other scales balanced. The ceiling of the working floor was badly damaged by concrete blown up against it from the center point of the explosion. The top of garner No. 3 was blown off. In many cases the bin hoppers were broken. The working floor or roof over the basement was entirely blown out.

Tanks B:—The center annex storage section of the plant was fairly well intact. The cupola and

pletely destroyed, and all that remained of it after the explosion was a mass of twisted steel, iron, concrete and bricks.

Building E:—The power and boiler house was badly damaged by the explosion. All windows were broken. Sections of the roof were smashed in by pieces of falling concrete and tile from working house. The interior of the house was piled waist high with debris that came through the roof. All the boilers were intact and undamaged.

Building F:—The millwright shop was completely destroyed by fire.

Building G:—The dust house was burned to the ground, together with a frame box car that stood by the house loaded with dirt. All that remained

carried 300 feet away. Each column weighed some six tons. The terrific heat charred the chairs, barrels and wooden equipment of the scale floor but none of the wooden equipment burned up. Chemists assert this condition of affairs is accounted for in that this burning took place without oxygen being present. Chunks of grain were found burned black and apparently run together and the supposition is they were burned with intense heat and no oxygen present. The same results might be obtained had the grain been put through a stilling process.

A watch was found 250 feet from the elevator. The crystal was broken and the hands pointed to 2:10 o'clock.

A block of concrete weighing a half ton was hurled 15 feet by the force of the explosion and driven through the wall of one of the tanks.

Twelve box cars on the siding by the elevator were riddled by rocks hurled by the force of the explosion.

The corn fields about the elevator were torn and gouged until they resembled a battlefield of France.

THEORIES AS TO CAUSE OF EXPLOSION

It was conceded by a large number of the workmen that the explosion originated in the basement in the vicinity of No. 3 Receiver. In closely observing the wrecked building, circumstantial evidence seems to point out that the explosion originated at this point.

The following theories regarding the probable causes of the explosion were suggested during the course of the investigation:

1. Incendiarism due to labor troubles.
2. Smoking in the elevator.
3. Striking or carrying matches in the elevator.
4. Negligence and carelessness on part of management and employees.
5. Choke-up in elevator legs.
6. Static electricity.
7. Sparks from adjoining railroad trains.
8. Mechanical defects.
9. Electrical defects.

The deductions brought out in regard to these theories during the investigation are as follows:

1. *Incendiarism.* The theory was advanced by some that the plant was destroyed by labor agitators and radicals who had placed a bomb in the building due to the fact that no union labor was employed. In the investigation it was found that the elevator was an "open shop." Efforts had been made to affiliate the employees of the elevator several times, but were not successful. The last effort was made several years ago but was of no avail, owing to the fact supposedly that the employees in the elevator were men that had been in the employ of the company for some time. At the time of the explosion two men who held responsible positions in the elevator belonged to the union, while all other employees were non-union men.

It is not very likely that this explosion was due to incendiarism produced by labor troubles, as both of the union men were on the grounds at the time of the explosion. It would have been more to their advantage had they selected a more opportune time than the time the explosion occurred, if they had intended to destroy the plant and kill the officials of the company by means of a bomb. The manner in which the explosion propagated and circumstantial evidence clearly point out that the explosion was not due to incendiarism but due to the ignition of dust in the plant.

2. *Smoking in Elevator.* Smoking in the elevator, if permitted, is an excellent means for the ignition of the dust cloud and producing an explosion. An open flame is all that is necessary to ignite the dust in suspension, and is easily produced in smoking when the smoker lights his pipe or cigarette by a match or by the glow which intermittently occurs when the smoker takes a puff.

At the point where the explosion probably occurred, several men in the employ of the company for considerable time were working. These men knew of the danger of smoking in an elevator, and it is not probable that one of the new men was smoking in the presence of these older men. When the explosion occurred one employee was outside smoking and away from his fellow workers who

were killed in the basement. This employee, a Negro, testified that the men were instructed to leave the elevator when they desired to smoke and that he abided with these instructions. No *Smoking* signs were posted throughout the plant and doubtless the other employees were aware of the danger and took the same precautions. It is interesting to know, however, that three pipes were found in cars of salvaged grain that came from the elevator after the explosion. It is not known whether these



EAST END OF TUNNELS BENEATH TANKS
Note the violence of explosion, as shown by manner in which concrete reinforcements were blown out

pipes got into the grain after the explosion through the carelessness of the workmen who were loading the salvaged grain on the cars.

3. *Lighting Matches in the Elevator.* The practice of lighting matches in an elevator is a very dangerous one and an explosion will result from so doing if there is the proper mixture of dust and air present. The employees were warned against the handling or carrying of anything in the elevator but safety matches, which were never to be used within the plant under any conditions. Matches, however, were found in the pockets of two of the workmen that had been killed by the explosion.

4. *Negligence and Carelessness on the Part of Management and Employees.* Negligence and care-

lessness on the part of the management and employees were causes that contribute to the frequent occurrence of dust explosions in mills and elevators. It is interesting to know that from March, 1916, to October, 1917—20 months—four of the largest grain and cereal plants in the United States and Canada were destroyed by dust explosions, in which 24 people were killed, 36 injured, and \$6,000,000 worth of property and foodstuffs destroyed. From the period of October, 1917, to August, 1919—21 months—there has been only one disastrous explosion, in which three workmen were killed and four injured. By comparing the two periods it will be noted that the explosions were more frequent in the former period. This fact can be accounted for in that the men and management were

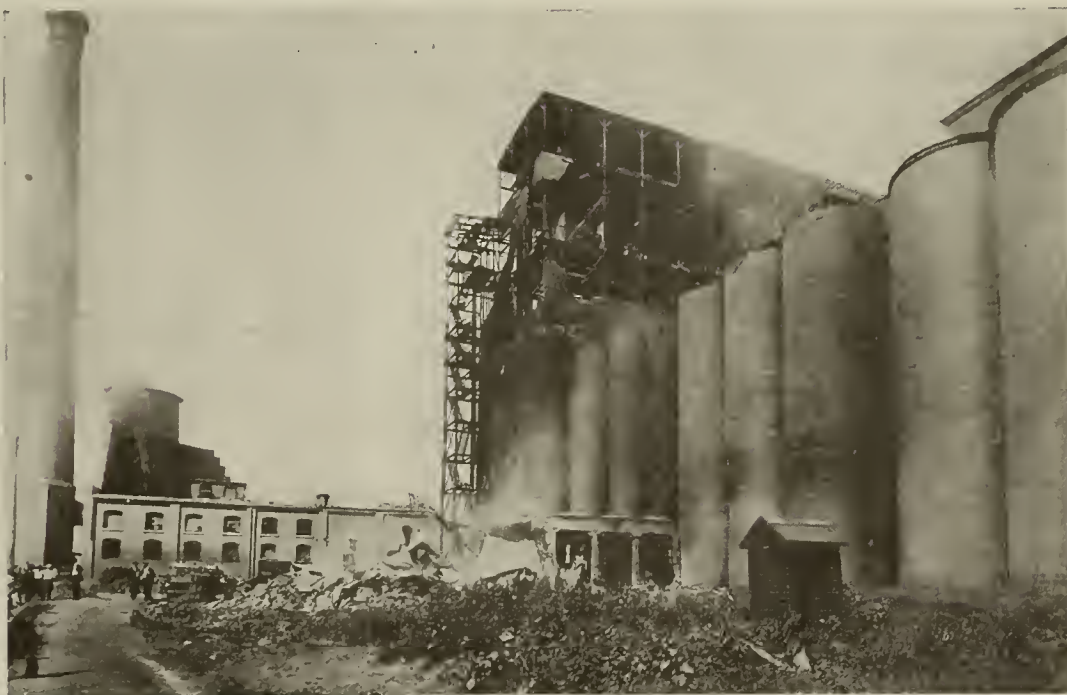
careful. During the period of the war the patriotic impulse of the workmen and management was touched in an effort to prevent the frequent occurrence of these explosions by means of a campaign conducted by the Bureau of Chemistry in co-operation with the United States Grain Corporation. As a result the number of explosions and loss of lives was greatly diminished, definitely indicating that carelessness and negligence on the part of the employees and management is a strong factor in the frequent occurrence of disastrous dust explosions. The employment of slip shod methods, lack of interest among the employees, lack of inspection, lack of cleanliness, worn out or unrepaired apparatus, machinery and equipment, lax rules and indifferent management, are frequently responsible for disastrous dust explosions.

5. *Choking in Elevator Legs.* Although many of the late explosions in elevators have been due to a choke-up in the elevator legs, it is not quite possible that the explosion originated from such a source. Only one or two legs were operating at the time of the explosion and since men were working about the boots of these legs it is likely that a choke-up would have been observed.

6. *Static Electricity.* There is a possibility that this explosion was caused by static electricity, but this is not probable since rope drive power transmission was used throughout the elevator and all machinery was of metal construction securely fastened to the reinforced concrete floor by means of long irons. In all probability any static electricity that was generated would be grounded by the metal spout connections that connected the machines to the steel elevator legs or by the trunking of the dust collecting system.

7. *Sparks from Adjoining Railroad Trains.* Engine sparks were not the cause of the explosion as the main line of the railroad supplying this elevator with cars was quite a distance away. As there had been no switching engine near the elevator several hours before the explosion occurred, it is not very probable that the explosion was caused by a spark.

8. *Mechanical Defects.* Mechanical defects are numerous in an elevator, and if not given the



VIEW OF ELEVATOR TAKEN SHORTLY AFTER THE EXPLOSION

proper attention often result in fire and explosions. According to the evidence secured at the coroner's inquest from the millwright and oiler, the plant was as far as they knew in perfect running order. Bearings had been examined and oiled a half hour before the explosion and no hot boxes were found. As men were working in the basement in the vicinity of the machinery that was being operated, doubtless they would have noted any trouble in the elevator boots, or hot boxes. An eye witness of the explosion who had worked in the basement did not mention anything wrong with the mechanical apparatuses around which he was working.

9. *Electrical Defects.* All electric defects such as short circuits, sparking motors, loose connections, overloaded circuits, poorly constructed snap

switches, poor wiring, ungrounded conduits and poor extension cords will produce enough heat and a spark of sufficient intensity to cause a dust explosion. Reports show that the electrical equipment in this elevator was below the standard required as a means for the prevention of disastrous dust explosions.

SUMMARY OF POSSIBLE CAUSES

This explosion was the most disastrous of its kind that has ever occurred in a grain elevator in the United States, for the reason that in no similar disaster have there been as many lives lost. The explosive powers of grain dust were clearly demonstrated as the result of this disaster.

All evidence available indicated that the explosion originated in the basement in the vicinity of No. 3 receiving legs where workmen were busily engaged in cleaning. In determining the exact cause of the explosion great difficulties were encountered, owing to the fact that all the evidence that was necessary to establish the exact cause, had been destroyed by the violence of the blast. There is a possibility that some one was smoking or struck a match, but no information could be secured to that effect, for if such were the case in all probability the man that smoked or struck the match while working in the basement was killed. Owing to the fact that smoking was prohibited in the plant and that the men realized the danger as was illustrated by one of the workmen leaving the basement just before the explosion to take a smoke, it is quite unlikely that smoking was the cause of the explosion. No information was available or could be secured regarding incendiarism. As all the machinery seemed to be well grounded it does not seem possible that the dust in suspension was ignited by a spark of static electricity.

The weather reports indicate that the relative humidity had been very low for several weeks previous and for that reason the dust in the elevator must have been very dry and, therefore, flammable, especially when the relative humidity of the air is very low. When the dust that has been allowed to accumulate is blown into suspension in the air by some slight concussion, it forms a dry explosive mixture and causes the small explosion to propagate.

There was no indication that there was a choke-up in the elevator legs. Workmen testified that they knew of no heated bearings in the basement. Metallic sparks may have ignited the dust but this is very doubtful. The scraping of a shovel on the cement floor could have produced sparks, but it seems quite improbable that sparks of such a nature would ignite the dust. Sparks from railroad trains did not start the explosion.

The most probable cause of the explosion may be said to be due to electrical defects. According to the evidence secured from one of the workmen, the ignition of the dust may be said to have come from a short circuit or breaking of an incandescent electric lamp bulb. The short circuit may have come from several sources, but the most probable source is that of the use of poor extension cords.

Three possible theories remain that may have been the source of the ignition of the dust:

- (1) *A short circuit produced by the use of poor extension cords.*
- (2) *The breaking of an electric light bulb.*
- (3) *The use of unprotected electric lamp bulb.*

SUGGESTED CHANGES IN CONSTRUCTION

In recent months there have been a number of dust explosions in so-called "fire-proof plants." It appears that elevator owners and operators feel that their plants will not "burn" and forget that good-housekeeping is essential to prevent them from "blowing" up.

Because of these recent and frequent disasters the opinion is beginning to prevail that a concrete fireproof elevator, unless well maintained, may become more dangerous than an old wooden house from a dust explosion standpoint. In a wooden house an explosion occurs and blows out one side of the building. Fire follows the explosion, but if the sprinkler system has not been destroyed the fire is immediately put out. In a concrete house the explosion is very violent, because heavy pres-

ures are built up due to the solid walls. Concrete elevators, however, may be made to reduce the explosion hazard if properly constructed. The following suggestions with reference to the construction of "fireproof" elevators are made:

Thin Walls with Large Window Areas

In order to prevent high pressures from being built up within a plant by heavy concrete wall construction, it is suggested that walls as thin as practical be constructed. These walls should be constructed with large window areas with a view of providing good ventilation and decreasing the resistance offered to an explosion by walls.

Steel Curtain Doors

Steel curtain doors are already being used in elevators on the working floor. Probably this same type of door could be used to an advantage in the reconstruction of the walls on the working floor of grain elevators. During the day these doors could be opened and thereby provide good ventilation to the working floor and act as a vent to any explosion that may occur on this floor.

Steel elevator legs from the boots to the head are recommended instead of combination steel leg and "leg bin." An entire steel leg would confine the explosion a great deal more than the combination, while at the same time it would not contain the great accumulations of dust as is usually found in a tile or concrete "leg bin."

Vent to Outside

If suction cannot be placed on elevator legs, bins, etc., it is recommended that all elevator legs, bins, garners and scale hoppers be vented to the outside. Scale hoppers and garners especially should be vented to the outside for the reason that when grain is run into a scale hopper the dust laden air in the hopper is forced out. If a vent is not installed this dusty air will be forced out into the elevator building, but if the hopper is vented the dusty air will go outside. By installing the vents to elevator legs an explosion in the legs will be exhausted to the outside if the legs are constructed of all steel.

Construction of Bin Floors

It is recommended that all bin floors be constructed flush with the top of the storage tanks, thereby eliminating the dust hazard produced by the accumulating of dust between the top of the bins and the ceiling of the bin floor. Dust that accumulates in such places becomes very old, dry and flammable. When an explosion occurs in some other section of the plant this dust is easily thrown into suspension and acts as a "feeder" to the initial explosion.

Arrangement of Ledges or Surfaces

It is recommended that all ledges or surfaces where dust may accumulate in the building structure be placed at an angle greater than the angle of repose of dust. No dust accumulation can lodge in a structure of this nature. It must be remembered that a "fireproof elevator is not explosion proof."

ELECTRICAL EQUIPMENT

Conduits. It is recommended that all conduits be grounded. If an electric wire should touch one of these conduits there would not be the possibility for the entire plant, especially if it is made of steel framework, to become electrified and give off sparks.

Removal of Static Discharges. As a means for the removal of static electrical discharges it is recommended that all machines where there is a possibility of static electricity being generated be grounded.

Switch Boxes. All switch boxes should be kept free of dust. Switch boxes should always be kept closed. The door to the box should fit tight and should be arranged so that it can never remain open unless held by the handle.

Extension Cords. All extension lights must be heavily guarded. The guard must not be fastened to the bulb, but instead it must be fastened to the socket in such a manner that it can in no way be made to touch the light bulb. Only dust proof sockets should be used on drop cords where there is ever a cloud of dust.

DUST COLLECTING SYSTEM

It is recommended that instead of one dust collecting system being installed for the removal of

all dust from the plant, several systems be installed, each system in itself to perform a certain function in the removal of the dust from the plant. If an aspirating system is installed this system should be made separate from the suction floor sweep system. Also there should be one system in the "texas" for the elevator legs, garners, scale hoppers, spouts, etc., and another system on the working floor for the elevator boots instead of one system caring for the aspirating on the upper and lower floors. There should be two suction floor sweep systems, one for the "texas" and the other for the working floor.

It is recommended that, if possible, the main suction trunking of the dust collecting system be installed outside the plant. If an explosion propagates through the system it will be carried outside and probably do little damage. In this trunking outside the plant some sort of a relief valve could be installed which would relieve the pressure and vent the explosion outside before doing any damage within the plant. All dust collectors should be outside the plant.

All trunking of the dust collecting system should be constructed in sections, so that it is possible to take down the trunking and clean it out. This trunking should be of such a size that high velocities prevail within the system for the reason that no dust shall be able to fall to the bottom of the steel tube. All trunking should be grounded for static electricity.

HOUSEKEEPING

Good housekeeping is essential for the prevention of disastrous dust explosions. Many ideas prevail as to what constitutes good housekeeping. Elevator men contend that dust in an elevator is a necessary evil, that in operating an elevator dust accumulates very, very fast, and that there is no need of cleaning because the elevator is soon dirty again. It is true that dust accumulates fast, but if dust is allowed to accumulate and these accumulations are swept up only once in every two weeks, dangerous dust must be handled because the dust in that space of time has become dry and inflammable. As stated before, many ideas prevail concerning what constitutes good housekeeping and a clean plant. Many elevator men think that their plant is clean when the floors are swept and the piles of grain and dust are removed. They forget or never see the dust accumulations overhead that are so dangerous. Dust on the floor is not dangerous while in that state, but it is the dust overhead that must be feared. It is interesting to note how many men will state that an elevator is clean when only the floors have been swept. The only way to make an elevator safe is to sweep it every day. In order to do this regular sweepers must be employed to pay particular attention to the dust overhead.

Having stated that it is essential that this dust be removed the question arises as to how it shall be removed. The regular method used today is the old style "push broom" and "elbow grease" method. The compressed air method is also used to a great extent in blowing down the dust accumulations overhead. In contrast to these two methods, a vacuum system of the nature of the vacuum cleaning systems used in houses for cleaning carpets, etc., has been suggested. It is not known whether this proposed system is practical, but preliminary results have been encouraging, however, and for that reason experiments should be continued to determine its practicability.

Suction floor sweep systems give good results, but instead of one system to care for all floors, two systems should be installed, one for the "texas" or the upper part of the elevator and the other for the working floor.

TESTS have shown that seed developed by the Canadian Seed Association produced an average of four bushels to the acre more than ordinary seed. The organization grows and sells its own seed.

SEVERAL western roads have cut the hay rates from mountainous territory to Missouri River points in two, and the result is that Wyoming and Montana hay can be placed in Omaha or Kansas City cheaper than much of the Nebraska and Kansas hay.

COLLECTING RAILROAD GRAIN
CLAIMS

BY R. O. STUART*

I would like to suggest that every shipper who forwards cars of grain without weighing, either because they have no scales or for any other reason, measure the depth of the grain in the car and satisfy themselves that the load has been carefully leveled off and ascertain the actual depth in inches. If they will do this, they will not be placed in any serious difficulty so far as their rights are concerned. By ascertaining the depth to which the grain has been loaded and the test of each measured bushel, adding thereto a reasonable amount for density, the quantity of grain loaded can be easily determined. This should always be done so that in case any part of grain in the car be lost in transit, the shipper will have a legal basis for determining the extent of his loss and the means of establishing proof of the same.

This record should be made a part of your permanent records and should be made in writing in some book at the time that shipment is made, that it may be a matter of record in case you ever have occasion to require it. You do not necessarily need to keep a record of the dimension of the car; however, it would be just as well to do so. If you have the depth, you can always secure the dimensions of any car belonging to any carrier by referring to a copy of the "Official Equipment Register."

The most important information required, in fact, the material information that is required in loading grain without weighing is the test of each measured bushel and the depth loaded in inches. I mention the adding of a density weight, and by this, I would like to state, that line elevators in Minneapolis have made many tests to ascertain what the density should be and have concluded from statistics that it amounts to two or three pounds per measured bushel, although some of them are of the opinion such density might run as high as five pounds per measured bushel. From my experience in handling thousands of grain claims, I believe that the two or three pounds added to the actual test weight of each measured bushel is fair, both to the owner of the grain and the carrier with whom it was entrusted.

In a short address of this kind, of course, it would not be possible to go fully into the laws which govern the presentation and collection of grain claims. However, it is of importance that the shipper have at least some knowledge of the most salient law points governing the collection of these claims, and probably many of you are familiar with some of the fundamental features of our laws relating to these claims. One of the most important laws affecting the shipper's rights for loss and damage brought about from the negligence of the railroad company is the Cummins Amendment to the Interstate Commerce Act.

On March 4, 1915, the Cummins Amendment to the Interstate Commerce Act was passed by Congress, Chapter 176, and became effective 90 days thereafter, or June 2, 1915. This act provides in part as follows:

Suits for loss and damage or delay shall be instituted only within two years and one day after delivery of property, or in case of failure to make delivery, then within two years and one day after reasonable time for delivery.

Several changes have taken place in regard to litigation of claims which are very important to the grain shipper. On February 28 Congress passed a bill known as the Transportation Act of 1920, which provides that in computing the time for the bringing of suit on claims arising prior to the time of Federal control, the 26 months of Federal control shall be eliminated. This means if you have a claim covering a car of grain moving January 1, 1917, that claim would not be outlawed under the two year and one day clause although more than this time has elapsed, as this bill provided the entire 26 months of Government control would be

eliminated and cannot be considered as any part of the two years and one day period under which suit must be started. Therefore, claims dating as far back as June 1, 1916, would not be outlawed at this time and the shipper would still retain his right to recover.

There is one thing, however, which should not be overlooked. That is, claims arising during Government control are not affected by the Transportation Act of 1920 in so far as elimination of time is concerned. Therefore on any claims arising during Federal control you have only two years and one day in which to file suit providing that claim is definitely declined in writing by the carrier prior to the last six months of the two years and one day period. This means if you have a claim that is properly presented on a shipment arising during Federal operation of railroads, in case of rejection by the claim department, the claim would have to be declined at least six months before the two years and one day had elapsed and in case they fail to make a declination, then you would still have, under the Decker decision, six months' time in which to institute suit after the date of the letter refusing to honor the claim. No extension of time for the filing of suit has been given on any claims that arose and were filed during Government control and it is unlikely that there will be any change on claims against the Administration.

The provisions of the present bill of lading provide that claims must be made against the carrier within six months. It does not make any difference whether your claim is presented to the bill of lading carrier or to the delivering carrier. Claims for loss should be presented to the railroad agent or the proper claim official either by yourself, the commission firm or someone representing your interests. If such claims remain unadjusted for two years and one day, then and in that case, except in those cases which I have just outlined, the claim is outlawed and the shipper cannot force a collection regardless of the merits of his claim.

This is a peculiar situation, but the validity of the bill of lading has been upheld by our courts and until some new bill of lading changes these provisions, shippers will be obliged to be governed by it. The claimant has no choice under a condition of this kind. He must either secure a settlement of his claim or protect his rights in the matter. These rights can be protected in only one way under the bill of lading and that is by bringing suit. By taking this action the shipper's rights are protected and all limitations extended indefinitely. Many shippers are under the wrong impression. They feel the bringing of suit may engage them in litigation. This is not necessarily true. Suit can be commenced in conformity with the bill of lading requirements and your rights are indefinitely extended by such suit after which you may use your own discretion with regard to further procedure.

Claims for loss or damage on shipments of grain against carriers can be divided into three classes. First, shortage from cars where the grain has been weighed both at shipping point and destination. Second, shortage from cars where the quantity loaded has not been weighed but the weight estimated and the grain weighed only at terminal. Third, delay claims. This third class is mostly made up of claims covering decline in market, or heating, which causes deterioration and frequently makes necessary the rehandling and reconditioning before grain can be sold.

Our courts have held that the shipper who has sustained a loss in transit has made out a cause of action against a carrier, when he is able to prove that a part of the shipment of commodity transported was lost in the course of transportation. The only means available to shippers of proving these facts is to establish the quantity of goods loaded at initial point and the quantity of goods delivered at destination. Where there is a discrepancy in these two amounts and where a loss in transit has been shown, the shipper has a meritorious claim and the law will presume that the loss in transit occurred through the carrier's neg-

ligence. This is the holding of the courts of almost every state in the Union.

The courts have uniformly held that where a shipment has been unreasonably delayed and there has been a decline in the market price of the commodity shipped, that then the carrier is responsible to the shipper for all loss that he sustains by reason of such delay. When grain becomes damaged or deteriorated in transit as a result of a delay on the part of a carrier, then if it can be shown that the delay was due to the carrier's negligence and also that the damage or deterioration of the grain was due to such negligent delay, then the shipper can recover in full for all of such loss. Negligence on the part of the carrier will be presumed if the delay is more than nominal.

Under Order No. 57 the Railroad Administration has stated no "commonly termed" clear record grain claims will be adjusted, that the absence of a noticeable defect will be sufficient cause for a rejection of claim. The fact must not be overlooked that cars will often leak when moving and show no evidence of a leakage when standing still, that many cars leak in transit, that minor repairs are then made by train crews, switchmen and repair men which are not always recorded. The Railroad Administration has issued another order ruling that claims for loss and damage shall be adjusted on the basis of legal liability or merits.

It, therefore, plainly appears that Order No. 57 is in direct conflict with the previous order of the Railroad Administration ruling that claims shall be settled on a basis of their legal merits, or if claims are to be settled on the basis of the legal responsibility of the carrier as created by law and sustained by court decisions, claims for loss and damage commonly designated as "clear record claims" could not be arbitrarily disregarded by the carrier nor can the carrier justly rule that these claims should, under no circumstances, be given consideration. The shipper, as a result on all so-called clear record claims has but one course to follow, and that is to present his claim to the carrier and after giving it a fair opportunity to settle, to institute a suit in law to protect his rights and to recover the amount justly due him as a result of the carrier's negligence.

In connection with the declination of the commonly termed clear record grain claims, I recall an article appearing in one of our leading grain publications a few months ago showing that railroad detectives report having made 14,114 arrests for thefts from cars during 10 months ending February 1.

I might add for those that may be unfamiliar, that the rules issued by the Railroad Administration and carriers do not take away a shipper's court rights.

SUSCEPTIBILITY OF PACIFIC COAST
WHEATS TO BUNT

In a series of experiments lasting from 1915 to 1917, it was thought to test the susceptibility of the principal varieties of wheat grown in Washington, Oregon and Idaho to "bunt" (*Tilletia tritici*). The grain was strongly infested with spores of the fungus and sown on the same day each year under as uniform cultured conditions as possible. The percentage of plants infected at the time of harvest varied largely with the different varieties. With Turkey it was 26.96 per cent; with Alaska it was 18.60 per cent; Forty-fold, 76.40 per cent; Red Russian, 83.65 per cent; Winter Bluestem, 93.24 per cent; Little Club, 87.75 per cent; Jones' Winter Fife, 94.17 per cent. The hybrid wheats showed an infection of over 90 per cent.

AT A LUMBER meeting in Minneapolis recently, Charles Skewis of Storm Lake, Iowa, made the statement that \$200,000,000 was spent for automobiles in Iowa last year and that the operating cost was \$400 per car. He further stated that if the entire corn crop of Iowa were marketed at 80 cents bushel, it would not finance the operation of the automobiles purchased and owned in the state. But 1920 is a different kettle of fish than 1921.

*Mr. Stuart is manager of the Security Adjustment Company, Inc., of Minneapolis. The above is a portion of an address he delivered recently before the Northwestern Grain Dealers Association.

NEWS LETTERS

KANSAS CITY

B. S. BROWN - CORRESPONDENT

A DECIDED change in sentiment regarding grain legislation was apparent among members of the country branch of the grain trade the latter part of January, according to numerous reports reaching Kansas City. The agitation for a Government regulated market or for sweeping changes in the present system of marketing farm products has run its course, grain men believe. Sentiment is judged chiefly by reports from Kansas. At the outset many of the Federal bills affecting the grain trade had strong support there and several originated there. When it was seen later that Federal action was improbable a number of measures were introduced in the Kansas legislature, the most important of which provided for a penalty of 10 to 21 years imprisonment for selling something which was not in the seller's possession. Commenting on the Green Bill, which is along this line, E. J. Smiley, secretary of the Kansas Grain Dealers Association, said in a circular letter to members recently: "Write to your senator or representative at once, giving him your reasons why you wish him to vote against the bill, and do it now. The effect of a law of this kind would be to drive all future business out of the state and might force all of the local boards of trade out of business."

President F. C. Sharon of the Kansas City Chamber of Commerce has appointed a committee of 19, including Ben L. Hargis and Wallace C. Goffe of the Board of Trade, to raise funds for the relief of famine conditions in China.

Only \$8,000 has been realized on the assets of the Orthwein-Matchette Grain Company, which failed last April with liabilities of around \$200,000. Forfeiture of memberships in the Kansas City and Chicago boards of trade deprived creditors of about \$20,000. The case will be kept open for one year after the failure when the trustee in bankruptcy will make his final report.

An investigation which savored of politics was recently made in the office of James T. Bradshaw, State Warehouse Commissioner and head of the Missouri State Grain Inspection Department. The probe was proposed in the Missouri legislature by a resolution reciting that Bradshaw "had taken unto himself the power and authority to audit and pay his own accounts, expenses of office, salaries of inspectors," etc., and "has changed salaries of many assistants." At the investigation Bradshaw told of the many handicaps under which he had operated the grain inspection department, due to inadequate appropriation. The matter is still under consideration but he was virtually acquitted of the various charges as his expenditures were approved. An increased appropriation has been recommended for this year and it is thought it will be approved.

President Ben L. Hargis represented the Kansas City Board of Trade at the hearing of the House Agricultural Committee in regard to the numerous legislative measures affecting the grain trade. Press dispatches said his arguments against changes in the present system of marketing grain or of conducting markets carried much weight and did much to change sentiment which for a while appeared in favor of the freak bills that were introduced from all sections of the country. C. W. Lonsdale, who was on the general committee of three with Leslie F. Gates of Chicago and Fred Wells of Minneapolis, did not attend the hearing.

Oscar T. Cook, formerly with the Beyer Grain Company, has joined the recently organized Barnes-Piazza Company. He was assistant to D. F. Piazzaek when the latter was agent of the United States Grain Corporation at Kansas City. The Beyer Grain Company, which has offices in several Kansas towns, is closing its Kansas City office.

Expenses of the Kansas City Board of Trade last year were \$56,000, 80 per cent of the total going for salaries, the transportation bureau and market reports. The membership fund of the board is \$265,000, practically all invested in Liberty Bonds. The insurance fund is \$30,000. Thus far the Board's insurance has cost members \$7.75 a thousand per year.

A public warehouse bill, prepared under the direction of J. S. Hart, Kansas state grain inspector, is expected to be passed at the present session of the Kansas legislature, as practically all branches of the trade have expressed themselves as in favor of it. The bill would

enable all country houses as well as the terminal elevators to issue warehouse receipts. At present the big majority of the country elevators in Kansas cannot issue receipts as no provision is made for weighing and inspecting grain at country points. Farmers have indicated they were in favor of the measure and grain men are of the opinion that a broadening of the weighing and inspection service would be beneficial. Among Kansas City elevator men it is hoped the bill will take the place of agitation for community elevators, the latter to be erected by bond issues. New elevators in the Southwest are not approved because the aggregate elevator space in the Southwest is more than adequate for all requirements.

An occasional demand for Southwestern Hard wheat from Minneapolis was reported at Kansas City the past month. The grain was wanted for mixing purposes as only choice samples were bought. While the difference in prices at the two markets made the purchases unusual, dealers were not inclined to attach any special significance to the transactions. At the same time that Minneapolis bought here one of the larger elevator concerns was buying low grade wheat in Minneapolis to bring to Kansas City.

A large amount of wheat that was improperly stored or was not protected from the weather arrived at Kansas City last month. The proportion of musty wheat was large, most of which sold at moderate discounts. Sections of Kansas and Oklahoma that could not get cars earlier in the season now have all they want.

The following officers of the Kansas City Grain Clearing Company have been re-elected for 1921: Frank G. Crowell, president; E. O. Bragg, first vice-president; C. W. Lonsdale, second vice-president; Harold F. Spencer, secretary and treasurer; G. G. Lee, manager.

The Kansas City Board of Trade Rules Committee has made a decision that out-inspection on grain ordered for transfer and shipment is distinctly a charge that should be paid by the buyer.

The following officers of the Kansas City Grain Club, the social organization of the Board of Trade, were elected at the annual dinner recently: James N. Russell, president; Fred Lake, vice-president; E. J. Rahm, secretary and treasurer; Executive Committee, Frank Bruce, B. C. Moore, O. A. Severance, E. E. Roehen and B. C. Christopher, Jr.

D. F. Piazzaek was recalled from a trip to Central America recently by the death of his father, a pioneer miller of Kansas.

The condition of Winter wheat in the Southwest is generally described as good. A heavier snow covering would have been beneficial but as the winter has been unusually mild in most localities there has been no important damage to date. In parts of Kansas alternate freezing and thawing have caused some unfavorable comment from crop reporters, but the areas affected are not large. Reports of the green bug in Texas had an unsettling effect on the market the first part of the month.

Export demand for wheat at Kansas City was dull the latter part of January and the first part of February. Bids generally were in the market, but as a rule they were below a working basis and no business resulted. There was some activity reported at the Gulf which was often included in the total of new orders, though local advices were to the effect that the bulk of the transactions represented old orders.

A voluntary petition in bankruptcy was filed in the Federal Court at Kansas City February 7 by the C. V. Fisher Grain Company. The liabilities of the firm are \$45,594 in excess of the assets. The creditors are grain firms in several states. C. V. Fisher, a member of the Board of Trade, is president of the company. The recent failure of a Texas company was a factor in the difficulty of the Kansas City concern.

Dissatisfaction on the part of grain producers with present freight rates is increasing and is likely to become a factor of importance in the grain trade, according to W. R. Scott, Board of Trade Transportation Commissioner, and numerous receivers and shippers. The movement of Kaffir and Milo from Texas and other parts of the Southwest has practically been brought to a standstill by the fact that freight costs absorb the bulk of the gross returns. From many points in the Panhandle the freight to Kansas City is 50 cents a hundred, which is more than half the price delivered here, and if the grain is sold East, the loss to the shipper is greater. The same situation, though to a less extent, prevails in corn and oats, due to the low prices of these grains at terminals.

The Board of Trade has indicated that it will assist in a solution of the problem, but there has been no indication yet as to what the solution will be.

Wheat receipts at Kansas City last month were the largest of the crop year and by far the largest ever reported in January. The unusual mid-winter movement was attributed in part to improved car service, practically all sections of the Southwest reporting that the supply of cars was ample for all requirements for the first time in several seasons. The main reason for the big receipts, however, was the fact that exporters had bought enormous quantities of wheat for delivery in January and with the car situation satisfactory practically all the contract grain arrived on time. Total receipts were 7,622 cars, compared with 4,939 in December and 4,991 a year ago. The 10-year January average is 2,415 cars. The former high record for the season was 6,320 cars last August.

The big movement reached its crest shortly before the end of the month and receivers do not expect another big flow of wheat. Practically all the grain last month was on contract and did not appear on the cash market. Consequently on the days of biggest receipts offerings were moderate.

The latest decline in prices the first of the month checked country offerings in all parts of the Southwest, after they had been unusually liberal for several weeks.

INDIANAPOLIS

EARL BULLOCK - CORRESPONDENT

IN KEEPING with the grain and milling trade, as well as other lines of industry, the bag manufacturing industry continues rather quiet, according to W. H. Simmons, general manager of the Bemis Indianapolis Bag Company, with plant and offices at Barth Avenue and the Belt Railroad. "The bag making industry," Mr. Simmons said, "remains rather quiet, which is in keeping with the general situation affecting most lines of industry, and particularly the grain and milling lines. Prices of raw materials entering into the manufacture of bags and containers, especially burlaps, are nearing the prewar levels. Cotton also is lower than in years. Conditions may improve shortly, at least there are some indications pointing that way."

Loss, estimated at \$45,000, resulted January 25 in a fire which destroyed the grain elevator of H. L. Walker, at Montpelier, Indiana. More than 45,000 bushels of oats and other grain, and hundreds of pounds of wool were destroyed. It is believed the fire was due to faulty electric wiring. The structure was sheet-iron covered, which handicapped the firemen's work. Loss is partly covered by insurance.

A new company has been organized at Sullivan, Ind., to acquire the interest of the Sullivan Mill & Elevator Company and the New Lebanon Elevator. The affairs of the new company will be in the hands of Frank Mason, Addison Drake, Lewis Brooks, Jr., J. K. Coulson and B. F. McCoy. The new company is capitalized at \$100,000.

Charges of exceeding the automobile speed limit within the city limits of Indianapolis were filed in the City Court recently by G. W. Sheek, president of the Farmers' Terminal Grain & Feed Company, against Clarence C. Poole and Edward Waterman, deputy constables in the court of T. J. Rainey, justice of the peace in Irvington. The filing of the charges followed the arrest of Sheek by the constables on a charge of exceeding the speed limit, and his conviction in Rainey's court on this charge. When Sheek was brought into court, the constables testified that he had been traveling at a rate of 35 miles an hour in his automobile through Irvington. After he had pleaded guilty and paid his fine, Sheek remarked that his machine would not go as fast as the constables had said it was going. He says Poole and Waterman offered to convince him. Poole got in Sheek's machine and told Waterman and Sheek to follow in Waterman's machine, he said. Then, according to the speedometer on Waterman's car, Poole opened up the Sheek car to a speed of 25 miles an hour within the city limits and increased the speed to 42 miles an hour, after passing the city limits. Waterman maintained the same speed in following Poole, according to Sheek.

H. E. Kinney, of the H. E. Kinney Grain Company, is one of the men interested in the development of a large hydro-electric power system, which will consist of a number of dams and power units along the Tippecanoe River. It is said the improvement will be the largest of its kind in the world. The plans provide for the incorporation of the Tippecanoe Power Company, with a capital stock of \$3,000,000. No stock will be offered for sale, Mr. Kinney said. The larger part of the stock is to be held by New York and Chicago capitalists. Contracts already have been

made for the entire output of current. A survey of the waterways affected has been made, and if the waterways commission finds it has jurisdiction over the streams the corporation will start work under the supervision of the national commission. If the commission decides it does not have jurisdiction, the corporation will ask permission from the State Legislature to build a power plant. The first unit is expected to develop the equivalent of 17,000,000 kilowatt hours, or 20,000 horsepower. Six other units are claimed.

One of the largest grain companies to be organized during recent months is that of the Richland Grain Company, Earl Park, Ind. The company has a capital stock of \$600,000. It has been incorporated here and the directors are James R. Barr, Peter Barr and Samuel W. Gaunt.

The Plymouth Milling & Sales Company, of Plymouth, Ind., has been organized, according to word received here by Charles B. Riley, secretary of the Indiana Grain Dealers Association. The company has a capital stock of \$50,000, and has been organized by Floyd E. Jacoby, Samuel M. Welch and Claude Switzer.

Announcement has been made that the Colfax Grain Company, Colfax, Ind., has increased its capital stock from \$20,000 to \$30,000.

Funeral services for Anson P. Redfield, aged 80, who died recently at his home, 1814 North Talbott Street, Indianapolis, were held at the home February 1. Mr. Redfield had lived in Indianapolis for 14 years, and was widely known among the business men of Indianapolis. He was a fire insurance adjuster and had specialized on elevators and flour mills. He was born at Phelps, N. Y., November 1, 1840, and at the age of 18 went to Beaver Dam, Wis., where he was in the hardware business for about 20 years. He joined his brother in the insurance business in Chicago about 1880, and from this work he took up field work and the adjusting of losses. He is survived by his daughter, Mrs. D. A. Ade, and his son, Frank M. Redfield, both of Chicago. Following the death of his first wife, he married Mrs. Charles B. Coe, of Indianapolis, on June 5, 1900. He was a member of the Second Presbyterian Church.

CINCINNATI

HARRY A. KENNY CORRESPONDENT

THE general dullness during the month of January was interrupted pleasantly during the first few days of February by sharp rallies in all grains. Grain trade news during January favored the bear side, with Southwestern offerings appearing larger. During the early days of February wheat futures advanced 7 to 8 cents, but during February local conditions were entirely nominal, without offerings of good wheat and with few inquiries. The oats market weakened under the influences of easier wheat and corn, but the demand locally was fair, with prices only a fraction lower.

During both the month of January and the early days of February large receipts and insufficient demands to absorb the offerings weakened the hay market, and prices for Timothy declined 50 cents to \$1. Only 20 of a total of 60 cars on the tracks during the average trading days of the month were sold, although there were at times spurts which enlivened the market. Shipping orders, compared with the month of December, were few. A lack of purchasing power and the general financial depression was reflected in the trading. The present situation lacks strength, although a revival is expected.

At a recent informal gathering of the Board of Directors of the Cincinnati Grain & Hay Exchange, E. A. Fitzgerald addressed them on the work of the local Exchange during the past year, and lauded the efforts of the individual members.

W. L. Brown, of the grain and hay firm of the W. L. Brown Company, returned from Debray, Fla., recently, where he spent several months of the winter.

Joseph Frost, superintendent of the Early & Daniel Company for the past 30 years, died at his home in Norwood, a suburb of Cincinnati, during January. He had been ill for more than a year.

Farmers of Ohio are growing more than three times as much alfalfa as they did 10 years ago, according to the Federal Crop Reporting Bureau. There were 101,000 acres grown in 1920, with an average yield of 25 tons an acre.

Members of the Cincinnati Grain & Hay Exchange who attended the annual meeting of the Indiana Grain Dealers Association at Hotel Claypool, Indianapolis, Ind., recently, were: John Dorsel, Dorsel Grain Com-

pany; Daniel B. Granger and Louis McGlaughlin, of the Daniel B. Granger Company; Ralph Brown, of the Harry W. Brown Company; Walter Buhrman, of the Fitzgerald Brothers Company; A. C. Gale, of the A. C. Gale Grain Company; Walter Hopkins, of the Mutual Commission Company; C. S. Custer, of the Cleveland Milling Company; and H. Martin, of the Brouse-Skidmore Grain Company.

B. J. Drummond, executive secretary of the Grain & Hay Exchange, attended a conference between representatives of the grain trade and the railroads at Atlanta, Ga., recently, to make an adjustment on grain rates to Carolina terminals through Mississippi and Ohio river gateways, which, unless equalized, will leave Cincinnati at a disadvantage of 1 to 1½ cents on rates.

A newly formed company, the Cincinnati Seed Company, with capital of \$50,000, was incorporated here recently. Robert O. Strong, former representative on the Exchange floor of the J. Charles McCullough Seed Company, has been appointed head of the new firm. The new concern has acquired property on Spring Grove Avenue, opposite the Stock Yards Hotel. Mr. Strong, who has wide experience in the seed trade, will be succeeded by H. Trimble as representative of the McCullough Company.

A new Board of Directors for the Cincinnati Grain & Hay Exchange was elected at a meeting at Hotel Gibson here during January. The directors are: Robert Edmonds and Ralph Gray, for two years; C. S. Maguire, B. H. Wess, William A. Van Horn and Samuel Bingham, for three-year terms. Following this



HENRY M. BROUSE
New President, Cincinnati Grain & Hay Exchange

meeting the directors met on January 24 and elected Henry M. Brouse, president; John De Molet, first vice-president; R. S. Fitzgerald, second vice-president; E. H. Heile, secretary; B. H. Wess, treasurer; and B. J. Drummond, executive secretary and traffic manager. President Brouse is well deserving of the honor conferred upon him. He has been for years active in the affairs of the organization and has established an enviable reputation for his ability and integrity. He is progressive and under his administration the Exchange will certainly prosper. At a dinner, which followed, D. J. Schuh, retiring executive secretary, was presented with a handbag in recognition of his services.

Yeggs unlocked the safe of the B. H. Wess Grain Company during the past week and looted it of between \$700 and \$1,000 in currency and about \$500 in negotiable checks. Mr. Wess immediately stopped payment on the checks.

H. M. Brouse, of the Brouse-Skidmore Grain Company, represented the Cincinnati Grain & Hay Exchange at a conference with the executives of the National Hay Association at Pittsburgh, to effect adjustment and equalization of reconsignment charges at various hay markets.

Charles Joerg, department manager of the Dorsel Grain Company, spent a week in January motoring through the hay producing districts of Ohio. He completed a large amount of business for the firm.

The Campbell County Grain Producers Association elected the following officers at a meeting held in Covington, Ky., a suburb of Cincinnati, recently: John Trapp, president; Jesse Darlington, vice-president; William C. Hulley, treasurer; Frank Zink, treasurer; and Frederick Heinlein, business agent.

Cincinnati shippers to the hay market were notified recently to give the actual number of bales and weights as a material assistance in rendering prompt returns.

The Board of Directors of the Cincinnati Grain & Hay Exchange has so amended the rules relating to the delivery of grain as to conform with the Grain Dealers National Association, which, in effect, causes

a contract for delivery of grain to be in effect even though the time of delivery may have expired; that is to say, when the seller fails to notify the buyer of his inability to fill his contract, the obligation of the seller continues until certain provisions of the rules have been complied with.

Gustave Wisser, board marker and statistician at Exchange Hall, of the Chamber of Commerce, is now computing the average and range of price of commodities during the year 1920. Although the records are not completed as yet, Mr. Wisser says that the prices of the various commodities dropped 20 to 70 per cent during the past three months.

A group of yeggmen received the disappointment of their lives recently when, after blowing the large iron safe at the grain and hay establishment of Braun and Kipp, Sixth and Evans Streets, they found 75 cents. They showed they were the possessors of a sense of humor when they left the change as a tip for the janitor, who had to clean up the debris caused by the explosion.

B. J. Drummond, executive secretary and traffic manager of the Cincinnati Grain & Hay Exchange, has prepared the following statement concerning the importance of the grain and hay trade to the economic welfare of the city, and the possibilities of its further expansion, as one of the leading primary markets in the country. The statement will be issued to the members of the exchange in the form of a bulletin. Mr. Drummond says:

"The combined value of wheat, corn, oats and hay raised within the confines of Ohio, based upon 1919 production and present prices, would be approximately \$317,000,000 at points of consumption, but in order to get our product to these markets requires a freight charge of approximately \$97,000,000, leaving the combined value of the product on the farm in Ohio at approximately \$220,000,000. The freight charge necessary to get it to the point of consumption is approximately 44 per cent, and is pretty high total for the Ohio farmer to pay for transportation of his produce to market.

"It is a debatable question whether or not the present high freight rates are not discouraging the movement of the products from the farmers. Some railroad traffic men already admit that the advanced rates are not producing the revenue that the carriers expected, due to the fact that commodities are not moving over the same distances as heretofore, therefore the ton mile haul multiplied by the rate per ton is producing a smaller earning than would have been produced had the rates remained lower and the length of haul increased. Certain Western lines recognizing these facts have voluntarily reduced the rates in order to permit commodities to move to the consuming markets.

"The commercial interests in this, the market town of the Southeast, should present a united front for such readjustments in freight rates as will not only promote a free movement of grain and hay through this market, but we should render our support to the producers and consumers of these commodities wherever they are located throughout the country, to bringing such a readjustment to pass."

MILWAUKEE

C. O. SKINROOD - CORRESPONDENT

ARE the farmers closing out their grain, after getting tired of holding while prices go down? This is the question being asked anxiously by grain men of Milwaukee. Generally speaking, there is a variety of opinion. Some grain dealers say grain is being held more tightly than ever, while others say that some farmers at least are letting go of their supplies.

Receipts tell the best story of what the farmers are doing in the way of selling grain. For the first week of February, total receipts of grain at Milwaukee were 580 cars, against 1,227 cars the week before, 602 cars a year ago for the corresponding week, and 327 cars for the same week of 1919. This record indicates that receipts were large for the last week of January, but that there is a rapid contraction at this time, the next week seeing only about half the number of cars. Compared with a year ago, however, receipts are about normal, and they are nearly twice as large as they were two years ago.

The receipts of grain in Milwaukee for the past week were 93 cars of barley, 370 cars of corn, 46 cars of oats, 33 cars of wheat, 36 cars of rye and 2 cars of flax.

Milwaukee is still the second largest primary market for the receipts of corn, although St. Louis is giving the city a close race for second place. Receipts on the present crop in Chicago have been over 30,000,000 bushels, compared to 6,375,000 bushels in Milwaukee, and 6,155,000 bushels in St. Louis. Receipts in St. Louis have dropped, compared with 1919, while the Milwaukee receipts of corn jumped from 3,800,000

bushels, in 1919, to 6,375,000 in 1920. Local trade has almost doubled in a single year. Despite the large receipts of corn in Milwaukee, there is an excellent domestic demand, and also for export. The large corn mills in Milwaukee are a big factor in the heavy demand for corn locally.

In the past week, wheat has gone down 12 to 15 cents a bushel, and rye has declined 11 cents, while other grains are down only slightly for the last six days. Evidently, rye and wheat have not been as thoroughly deflated as some of the other grains.

Car receipts at Milwaukee tell an interesting story of what is going on in the grain trade over a longer period of time. This shows that the wheat trade of the city has fallen off steadily from 10,000 cars received in 1918 to 6,400 cars in 1919, and 2,300 cars in 1920. This expresses in part the reduction in receipts due to natural forces of trade, and also the lack of farmers' selling in the last half of 1920.

Corn trade in Milwaukee, however, is rapidly growing, with 8,900 cars in 1918, 6,400 cars in 1919, and 11,200 cars in 1920. These figures indicate that corn receipts are almost 50 per cent above the receipts for 1918.

Receipts of oats in Milwaukee have also fallen off, due largely, it is believed, to the farmers' "strike." Receipts at the local market were 17,500 cars in 1918, 12,800 cars in 1919, and 11,200 cars in 1920. Trade in 1920 was, therefore, just a little under 1919, and considerably below the 17,000 car record for 1918.

Barley receipts in Milwaukee in 1918 were 6,500 cars, compared with 12,200 cars in 1919, and 5,700 cars in 1920. Barley receipts for 1920 were close to the record of 1918, but much less than receipts for 1919.

Rye receipts at Milwaukee are comparatively steady, but constantly becoming larger, apart from the farmers' "strike" on selling. Receipts for 1918 were 2,000 carloads, for 1919, 3,400 cars, and for 1920, 3,300 cars.



THE DONAHUE-STRATTON ELEVATOR, MILWAUKEE
Destroyed by fire on January 25

Receipts for 1920 were about 70 per cent over the record for 1918. This city is evidently becoming a very popular place to sell rye.

The flax seed trade of Milwaukee is also becoming more important with 89 cars in 1918, 165 cars in 1919 and 118 cars in 1920.

Combining all these figures, Milwaukee received an aggregate of all grains of 45,000 cars in 1918, 41,000 cars in 1919, and 34,000 cars in 1920. These figures suggest that the farmer's "strike" reduced the receipts of grain at Milwaukee by 6,000 to 10,000 carloads in 1920.

Corn damaged in the fire of Elevator A of the Donahue-Stratton Company still has some value. "We are selling the damaged grain to farmers," said P. P. Donahue. "It makes good feed for sheep and pigs. We have also shipped large quantities of it to Chicago, where it is purified and used to make distilled alcohol. The damaged grain contains from 38 to 40 per cent of moisture."

William O. Goodrich, president of the Goodrich Company, has been named to represent the Milwaukee Chamber of Commerce in the meeting of the Chamber of Commerce of the United States at Washington.

Reports received at Milwaukee indicate that there has been an enormous slump in traffic on the Chicago, Milwaukee and St. Paul Railroad, with only 110,000 cars of freight handled in January, as compared with more than 149,000 cars for January a year ago. This decline in traffic, it is reported, is the big factor in reduced income of the railroads, which is putting the lines in a tight place to keep going until business rallies.

The Interstate Commerce Commission rendered a decision in the case of the Kurth Malting Company of Milwaukee against the Great Northern Railroad, holding that the rate on barley malt in carloads from Great Falls, Mont., to Milwaukee, is not unreasonable. The Commission intimated, however, that, with the Eighteenth Amendment to the Constitution in good working order, there was little probability that there would

be shipments of such malt in the future from Great Falls to Milwaukee. Commissioner Eastman objected to the ruling, declaring that the rates ought to be adjusted to a fair basis, even if malt was not now being shipped to any great extent. He asserted that an improper relationship between rates "which threatens harm" is as unlawful as a relation which, at the present time, is "causing harm."

The latest figures on grain stored in Milwaukee indicate that there was 93,000 bushels of wheat on hand, 1,046,000 bushels of corn, 709,000 bushels of oats, 126,000 bushels of barley, and 49,000 bushels of rye. Stocks of grain are very small, with the possible exception of corn and oats, of which there are fair supplies.

F. C. Reynolds, veteran lake transportation chief, has been named a member of the Milwaukee Harbor Commission, to succeed Capt. Henry Leisk, who now resides outside of the city limits. Mr. Reynolds has served on the harbor board before for five years, and now he will fill out an unexpired term of two years. This commission is in charge of the tremendous harbor improvements of Milwaukee, which, in the aggregate, will cost several millions of dollars.

Milwaukee lost an important link in its grain facilities on January 25, when the Donahue-Stratton Company's Elevator A, with a capacity of 1,000,000 bushels of grain, was totally destroyed by fire. The loss included not only the building, but 175,000 bushels of stored grain, largely corn, and nine carloads of grain standing on track near the elevator. The entire loss is estimated at \$250,000 to \$300,000, and it is fully covered by insurance. The burned elevator was more than 50 years old, being built by the Milwaukee road in 1864. For some time the railroad operated it as a public house and for some time it was a "regular elevator." Since that time various firms have leased it, and, since

1913, it has been operated by the Donahue-Stratton Company. The company will make all the necessary arrangements to get other elevator facilities, and will not be greatly hampered, after the first few days of adjustment required.

J. L. Bowlus, manager of the transportation department of the Chamber of Commerce, has been named a director of the Milwaukee Traffic Club, which has just been revived again for the first time after the war. All of the leading traffic experts of Milwaukee are members of this organization. All sorts of transportation problems will again be attacked by the club.

Milwaukee rye handlers report that rye is in excellent demand here, especially to fill export sales. Prices are still high, despite in recent declines, they say. Wisconsin rye is in strongest demand, because of its unusually fine quality for the past season. Seaboard clearances of rye are reported to be very heavy, with exports ranging as high as double the volume of a year ago. In 12 months rye exports have approximated 50,000,000 bushels, as compared with about 30,000,000 bushels for the 12 months previous.

Milwaukee corn traders report that, although the visible supply of corn has been almost double that of a year ago, the demand here is very strong, both on export account and also for domestic demand.

The decisive slump in corn recently has led to lower prices for barley, the lower qualities especially showing the greatest weakness. Offerings are largely of the low grade barley. Because of prohibition, the demand for malting barley is limited, so that feed buyers are absorbing the bulk of the offerings.

Milwaukee grain men are going to wage a vigorous fight against a movement of lake carriers to change the grain bills of lading for the coming season. A meeting will be held at Detroit, at which the subject will be fully threshed out. The vessel men want a new bill of lading which will relieve them from the constant shortage in grain weights. Under the present system,

every pound of grain which is weighed into a vessel at an upper lake port must be accounted for at Buffalo, or other lower lake ports, and discrepancies in scales and losses sometimes result in heavy charges against the shipping concerns. It is expected that the Milwaukee grain men will be represented in full force at the meeting, and that Harry A. Plumb, secretary of the Chamber, will be present to fight the battle for local grain men. Such large firms as Taylor and Bournique are also expected to be represented.

H. M. Stratton, president of the Milwaukee Chamber of Commerce, and Harry A. Plumb, secretary, have been asked to take part in the meeting of the Chamber of Commerce of the United States, to try and devise some means of relieving the housing situation.

Walter J. Fitzgerald, leading shipping expert of Milwaukee, reports a deadlock between the ship owners and the grain shippers on the question of who is to pay for the loading of grain on ships. The ship owners want to be relieved of the charge they are now carrying, which is \$5 per loading 1,000 bushels of grain and \$1 for unloading the same amount.

The Milwaukee Harbor commission, through President William George Bruce, refuses to take a stand on the location of the new car ferry terminal site, until there is a thorough investigation. This terminal will be very important to the shipping interests of the city, as it will connect Milwaukee with the big terminals on the other side of Lake Michigan.

The contest centers around the question whether the car ferry terminal shall be put right near the harbor entrance, where it will be easily accessible, or whether it shall be placed on the so-called Petit site, which is a mile or so farther inland. It is said that the Petit site would mean a loss of 1,200 hours a year for car ferries, and that such location would mean a 50 per cent increase in the opening of bridges, thus delaying land traffic in Milwaukee by a whole hour per day.

The February rate of interest has been fixed by the Finance Committee of the Milwaukee Chamber of Commerce at 8 per cent. Rates are still at the top war level, indicating that there has been very little easing in money conditions.

While the country is officially dry, but not dry in fact, the Wisconsin Brewers' Association voted to keep up its organization another year to oppose the Wisconsin Anti-Saloon League, which the brewers say is attempting to defeat the will of the people, when they voted plainly and overwhelmingly at the last election for a beer with not less than 2.5 per cent alcoholic content. W. H. Austin, attorney for the brewers' organization, asserts that the Anti-Saloon League is engaged in a deliberate attempt to overthrow the manifest will of the voters. Mr. Austin says that the scheme of the anti-saloon crowd is to get the state law changed so that in the event congress raises the percentage of alcohol permitted under the Volstead law, the state of Wisconsin will still be dry. Evidently the brewers of Wisconsin still think there is a chance of getting so-called light beers with an alcoholic content of 2.5 per cent, or a little more. Gustav Becherer was re-elected president of the Wisconsin Brewers' Association, and other officers were also re-elected.

George E. Ballhorn, attorney for the Association of Commerce of Milwaukee, attended the meeting of the Mississippi Valley Association in Washington, and made a strong appeal to support the St. Lawrence deep waterway route. Milwaukee, he said, will have a great harbor ready for the time, in the near future when ships will be carrying the farm and manufactured products of the Middle West, direct to all parts of the World. H. G. Gardner, president of the Great Lakes-St. Lawrence Joint Commission is working on its report on the project, and that it should be completed in about three months. He said that the report might be ready in time for the consideration at the special session of Congress in April, but that its consideration at that time will also depend on the wishes of President-elect Harding.

New York is sending reports to the Middle West, including Milwaukee, that the new waterway would cost, as an initial expense, not less than \$600,000,000, and that the route would not meet expectations, even when completed. The New York men contend that the new route would mean a great waste, that it would require spending \$100,000,000 on preparing lake ports to receive ocean tonnage, and the work on the St. Lawrence River alone would cost \$500,000,000, of which New York would have to pay about 40 per cent. It is said by New York interests that the United States would get only one-fifth of the electric power developed by the proposed locks.

H. E. Byram, president of the Milwaukee Road, laid bare some of the obstacles of the railroad business, on a recent visit to Wisconsin. He declared that rail rates and rail wages, made during a time of hectic war prosperity, are not suitable for conditions such as they now exist after the war.

"The railroads fulfilled all their obligations during the war, despite some beliefs to the contrary," said Mr. Byram. "The Government took the roads, however, and

gave them a profit, based on the three previous years, two of which were fair and one good. For this reason, the railroads were not able to lay aside a reserve, such as other lines of business."

There is a woeful lack of freight cars, Mr. Byram pointed out. He stated that the Government used 2,500,000 freight cars in the war, and only 100,000 new ones were added. Thousands more are needed, he said, although there is a surplus just now. He asserted that the Milwaukee road would buy cars right now, 10,000 of them, if they could be obtained at the right price and if loans could be obtained. He pointed out that before the war freight cars cost \$1,000 each, and money could be borrowed for 4½ per cent. Now cars cost \$2,600 each, and loans cost 8 per cent, he maintained. The roads must mark time, he said, until the conditions get back to normal.

Kneisler Brothers, who have been in the retail flour and feed line since 1873, have added a grain department under Herman Jahns, Jr., and an office for receiving and shipping hay, under Arthur G. Kneisler. The office is in the Chamber of Commerce Building. Mr. Kneisler is very well known to the hay and grain trade after many years of experience. Mr. Jahns has spent his entire life in the grain trade, being a specialist in rye. For 15 years he has been active in the Milwaukee market. Prior to that time he was connected with a grain firm in the East.

ST. LOUIS

C. M. BASKETT CORRESPONDENT

THE St. Louis Grain Club held its annual meeting and election during the past month at the Hotel Statler, the following being elected to office: President, Roger P. Annan; vice-president, William T. McCoy; secretary, Eugene Sissler; Executive Board, John Caldwell, Fred B. Chamberlain, W. T. Brooking, Louis T. Hall and A. H. Beardsley.

The recent application of the Powell & O'Rourke Grain Company, St. Louis, to have the Brooklyn Street Elevator made regular under its management and classified as regular under the rules of the Merchants' Exchange, and the regulations governing regular elevators and warehouses, was approved by the Board of Directors of the Merchants' Exchange recently, same to become effective as soon as official weighing of the elevator has been made.

The following recently filed for membership on the Exchange: Culver L. Hastedt, of the Chase Bag Company, from Duane Hall; and B. G. Day, of the Illinois Central Railroad, from Chas. Rock.

J. F. Lamy, of J. F. Lamy & Co., Chicago, was a visitor on the local Exchange recently, where he was extended a warm greeting. Mr. Lamy was formerly connected with W. A. Gardner & Co., St. Louis.

R. M. Crommelin, general manager of the Collins Flour Mills, Portland, Ore., was in St. Louis recently, making arrangements to put his company's flour on the local market. He will be represented in St. Louis by Eugene Dreyer.

Edward M. Taylor, prominent grain man on the St. Louis Exchange for the past 50 years, is again back on the floor, after having undergone an operation to remove a cataract from his eye. The operation was highly successful, and his eyesight was fully restored.

The following is a brief summary of the local grain market by a local house: "Wheat—The financial situation in Europe overshadowed all other considerations in the market in the past week, but the news as a whole was bearish, and the tendency of prices was downward. Argentine news indicated that liberal exports are being made from that country, and that her wheat is being sold at prices lower than those which prevail on this side. The British Royal Commission not only has reduced prices and refrained from buying American wheat, but it has made liberal sales of Indian wheat to Germany, which had a doubly bearish effect. Several cargoes of Manchurian wheat on passage to Europe changes hands several times, and reports from Argentine show that wheat in that country is flowing towards the ports more freely, as farmers are showing more disposition to sell. "Winnipeg news continues bearish, and northwestern receipts are running heavy, as compared to normal years. Australian shipments of wheat are given as 2,152,000 bushels for the week, against 2,032,000 bushels for the preceding week, and 6,600,000 bushels since January 1. North American exports were 6,257,000 bushels of wheat and 203,000 barrels of flour. The decrease in the visible supply of wheat was disappointing, only 1,666,000 bushels for the week. Indian shipments for the week were 864,000 bushels, and since January 1 they were 2,760,000 bushels. Reports of export de-

mand alternate with reports of foreigners offering to resell cargoes purchased, keeping the market nervous. Russell's News Agency reports further beneficial rains in India.

"On the other hand, in the middle of the week, country points reported a better demand for wheat from mills, and that millers were bidding over exporters' prices for supplies, with little offering. Holland was reported to be in the market for wheat, and the local cash demand was better, on reports of improved demand for flour. The cash demand continues good for the best grades of soft winter wheat, but ordinary and low grades are dull and slow, and little is doing in hard winter. On Friday, February 4, wheat closed at \$1.56 asked, 14 cents lower than was bid on the preceding Friday. May closed at \$1.47½, 11½ cents lower than a week before.

PHILADELPHIA

T. A. SIEBER CORRESPONDENT

AT THE annual election of the Commercial Exchange held Tuesday, January 25, the following candidates were elected to office: President, C. Herbert Bell; vice-president, Horace Kolb; treasurer, E. H. Price; directors, Wm. M. Richardson, H. J. Horan, Wm. J. Rardon, Albert L. Hood, Louis G. Graff, F. Marion



C. HERBERT BELL
President, Philadelphia Commercial Exchange

Hall. The president, vice-president and treasurer serve for one year; the directors are all elected for a term of two years.

F. W. Behrens, Philadelphia agent for Arkell & Smiths, bag manufacturers, has returned from an extensive trip through Pennsylvania.

Mahlon R. Swartley, aged 69 years, died January 26. Mr. Swartley has been ill for over a year. He was in the grain business at North Wales, Pa., and a member in the Commercial Exchange for 38 years in the name of Swartley Bros.

Pennsylvania R. R. embargo No. 349, covering shipments of grain and grain products consigned to Shane Bros. & Wilson Company, Millbourne Mills, Pa., is cancelled, effective January 22, 1921.

Fire of supposed incendiary origin destroyed the main storage building of the Berkshire Farm, last week, owned by Louis G. Graff, a retired grain exporter and a member of the Commercial Exchange, near Malvern, Pa. The loss is about \$10,000, partly covered by insurance.

Hubert J. Horan, president of the Philadelphia Flour Club, recently moved his offices to 571 Bourse Building.

A spectacular fire recently destroyed the interior of the grain and feed plant of H. B. Cassel & Sons, 2131 N. American Street. The loss is about \$60,000 covered by insurance.

According to the monthly report of the statistician of the Commercial Exchange, the stocks of grain in public warehouses in Philadelphia on February 1 were: 1,434,356 bushels of wheat, 459,517 bushels of corn, 328,067 bushels of oats, compared with 1,814,888 bushels of wheat, 57,177 bushels of corn and 298,053 bushels of

oats on January 3 and 395,134 wheat, 158,702 corn and 208,009 oats on February 1, 1920. Receipts of grain at Philadelphia during the month of January were: 1,343,142 bushels of wheat, 1,154,397 bushels of corn, 259,043 bushels of oats and 303,090 bushels of rye. Exports from this port during the month of January were: 1,668,010 wheat, 535,195 corn and 303,451 rye.

A further step looking toward the equipment of city-owned piers in this port with flour-handling devices is under way. Captain F. T. Chambers, U. S. N., representing the port facilities' commission of the Shipping Board, recently came here at the direction of Admiral Benson, chairman of the Board, and conferred with Director Sproule of Wharves, Docks and Ferries. He was accompanied by Commander R. A. Barker, of the Millers National Federation. Some months ago a joint committee of the Millers National Federation and the Southwestern Millers League, pronounced Philadelphia the best-fitted Atlantic port for exporting flour.

Wm. P. Brazer, head of the grain firm of Wm. P. Brazer and Sons, left about the middle part of January for Pasadena, Calif., where he will locate for the balance of the winter.

Wellington C. Merritt, 46 years old, died at his home January 4, 119 Roosevelt Boulevard. Mr. Merritt in the course of his business engagements traveled through Mexico and Europe and came here six years ago and entered the employ of C. W. Bosler Feed Company of Ogontz, Pa.

A charter under the laws of Pennsylvania was recently granted to the State College Food Products Company, State College, Pa. The capital is \$5,000 and incorporated by J. H. Krumrine.

At the convention of Grangers held in Milford, Del., last month, preliminary steps were taken to organize a State Grange Exchange, a cooperative body to work with other exchanges throughout the country in buying and selling farm products. The Delaware exchange will be capitalized at \$250,000.

New memberships in the Commercial Exchange have been petitioned for during the past month by R. Raymond Tybout, chemist, 211 S. 13th Street, and Philadelphia Grain & Feed Company, 403 Sansom Street, Philadelphia, Pa.

Pennsylvania R. R. embargo No. 133, covering all carload freight consigned simply "Philadelphia, Pa.," when no specific delivery is shown has been cancelled, effective January 31, 1921.

Ellis McMullin, grain and feed merchant, has left for Stuart, Fla., where he will spend about two months.

On January 31 the Philadelphia office of the Taylor & Bournique Company was discontinued. The firm will be represented in Philadelphia hereafter by Robert Morris, formerly the manager of this company.

Levan S. Walters, formerly of the Walters Milling Company, and his son, Herbert L. Walters, have opened offices at 471 Bourse Building as grain shippers and receivers. The business is under the general management of Herbert L. Walters. The distribution of corn products which was formerly milled by the Walters Milling Company has been discontinued by them and taken over by Walters & Walters.

The Hecker-Jones-Jewell Milling Company, with headquarters in New York City, will build a 30,000 barrel capacity mill in Buffalo, according to their Philadelphia agent, and will use the old mill in New York City as a warehouse. The Buffalo mill, when completed, will be the largest east of Chicago.

The Farmers Exchange of Mifflingburg, Pa., has recently been incorporated for \$59,000 who have erected a building with a capacity of nine carloads, besides a warehouse and an elevator. The machinery is of modern type, including automatic weigher, receiving separator, attrition mill, corn sheller, cob crusher and wagon dump. The Exchange will sell in carload lots and handle seeds and feeds of all kinds.

In the neighborhood of 30,000 persons attended the Pennsylvania State Farm Products Show in Harrisburg, last week. The interest in the show has stimulated the movement for a state fair which was advocated by Governor Wm. C. Sproul and Secretary of Agriculture Fred Rasmussen in speeches at meetings held by members of a dozen organizations.

Charles C. Fraser, grain broker, has returned to the floor of the Exchange in the Bourse after being confined to his home for six weeks with a broken ankle. Mr. Fraser was held up by highwaymen while on his way home one evening and broke his ankle in a tussle with the robbers.

According to an estimate made by the State Department of Agriculture, there were 2,970,040 acres in Pennsylvania devoted to hay in 1920, with a total production of 4,044,250 tons. Lancaster led all counties in the state with 161,088 tons; Berks being next with

122,059 tons, followed by Washington with 117,770 tons. Luzerne was the leader in acreage production with an average of 1.70 tons.

The number of cars unloaded during January at Girard Point Elevator was: 59 wheat, 491 corn and 19 rye; at Port Richmond, 808 wheat, 111 corn and 166 rye; at Twentieth Street, 7 corn, 54 oats, 11 mixed grains, 2 buckwheat and 1 Kaffir corn.

NEW YORK

C. K. TRAFTON - CORRESPONDENT

MEMBERS of the grain trade on the Produce Exchange were notified recently that the Erie Company, after operating the Erie Elevator at the Jersey City terminal for 10 years, had ceased to do so. Hereafter the elevator will be run by the Long Dock Company, which is a subsidiary of the Erie Railroad Company. It was claimed that the change was brought about in part by the fact that the New York Produce Exchange required all public elevators to be under the control of the actual owners, such as the railroad company, for example, instead of private organizations.

Alexander R. Merkelson, for six years connected with Nye, Jenks & Co., formerly as cashier, but more recently as a representative on the floor of the Produce Exchange, has severed that connection and will hereafter act in a similar capacity for the Simonds, Shields, Lonsdale Grain Company, of Kansas City, being assistant to Paul H. Vilmar, their local representative. Mr. Merkelson has been elected to membership in the Produce Exchange. Leo J. Gaugler, who has been connected with Nye, Jenks & Co. since boyhood, has taken Mr. Merkelson's place as a floor representative of that company and has also been elected to membership in the Produce Exchange.

Emanuel F. Rosenbaum, president of the J. Rosenbaum Grain Company of Chicago, and also identified with the Chesapeake Export Company of New York, has been elected to membership in the New York Produce Exchange.

Brinkley Evans, of the Sun Grass & Export Company, has been elected to membership in the Produce Exchange, as has also John M. McCafferty of the Brooklyn Elevator & Milling Company.

Troels Fode, who formerly acted on the Produce Exchange floor as a representative of the New York Oversea Company, Inc., exporters and importers, announced that he had severed that connection on January 31. Alfred G. Howard, who will hereafter represent the New York Oversea Company on the floor, is an applicant for membership in the Produce Exchange.

Johannes L. Ravenswood, associated with G. Schilperoord, grain exporter, has applied for admission to membership in the Produce Exchange, together with Leo Wolf, export broker.

According to an announcement recently posted on the bulletin boards of the Produce Exchange, the Harry G. Gere Company, Inc., distributors of grain and hay, has made an assignment for the benefit of its creditors. Its difficulties, it was stated, were traceable partly to the failure of a local retail dealer.

The following committee has been appointed to receive from the members of the Produce Exchange contributions to the fund being collected in the United States under the leadership of Herbert Hoover for the relief of starving children in the destitute parts of Europe: George A. Zabriskie, chairman, Walter Moore, Wm. C. Mott, Harry J. Greenbank, B. Frankfield.

Harry J. Greenbank, chairman of the Flour Committee of the New York Produce Exchange, has caused the following notice to be displayed on the Exchange floor:

"Considerable trouble has occurred on account of the rejection of flour inspected without consent of the shipper and contrary to the provisions of the uniform bill of lading.

"We are advised that several large claims have been filed against carriers on account of violations of the provisions referred to. The Flour Committee requires that all buyers and receivers of flour wishing to avail themselves of official inspection must instruct shippers that carriers' bill of lading bear the following notation:

"Inspection and examination permitted at destination, otherwise official inspection at destination cannot be had."

James Veitch, manager of the grain elevating business of the International Elevating Company on the Produce Exchange floor, is among those who need not

worry much about the enforcement of the Eighteenth Amendment. Thanks to some of his friends on the floor, he will be able hereafter to "carry his own." At a small dinner, which is an annual affair with this group of friends, he was presented with a handsome silver pocket flask bearing his initials. With this useful as well as ornamental token "on the hip" he will be well fortified against any periods of drouth.

Arthur S. Jackson of Jackson Bros. & Co. and Arthur Cutten, grain commission merchant of Chicago, spent a few days in this city recently just before leaving with their families for a month's stay at Palm Beach. With Mr. Jackson's son, A. S. Jr., they visited members of the grain trade on the Produce Exchange.

Edward P. McKenna, of McKenna & Rodgers, grain commission merchants of the Chicago Board of Trade, was among the recent visitors on the Produce Exchange.

DULUTH

S. J. SCHULTE - CORRESPONDENT

H. F. SALYARDS and G. H. Spencer are the newly-elected president and vice-president, respectively, of the Duluth Board of Trade. W. B. Joyce, E. S. Ferguson, P. H. Ginder and W. W. Bradbury, constitute the Board of Directors. Mr. Salyards is one of the veterans on the Board and



H. F. SALYARDS
President-Elect of Duluth Board of Trade

his election as its head is well merited. He entered the grain trade in Duluth back in 1896 with E. C. D. Shortridge, former governor of North Dakota, as a partner. His present firm, Ely-Salyards & Co., has for many years been prominent in grain trade circles over the Northwest. The membership fee on the Duluth Board 25 years ago was only \$10 a year, and without any established basis of commissions, operators transacted business under uncertain conditions. "Since the trade has been properly organized under fair regulations, the commission houses have helped farmers in the marketing of their crops through the building of line elevators over the Northwest. Members of the Board here are entitled to credit for aiding the farmers' co-operative societies to finance the building of country elevators, and thus assisting them in the holding and the marketing of their crops," said Mr. Salyards.

Alexander D. Thomson, one of the earliest operators on the Duluth market, died at Palm Beach, Fla., on February 7, after a long illness from heart trouble at the age of 65 years. He was one of the real pioneers in the grain trade in the Northwest and a nation-wide figure in commercial and financial circles. He came to Duluth in 1883 from Montreal, and embarked in the grain business, trading as Dunn, Thomson & Co. In 1885, his firm became Barnes & Thomson, and then in 1888 the title was changed to A. D. Thomson & Co., C. A. Pillsbury of Minneapolis being a special partner. After Mr. Pillsbury's death the business was continued under the same title. A few months ago Mr. Thomson relinquished the active oversight of the business, and his son, Adam G. Thomson, became president of the company and James W. Galvin, secretary and treasurer. As the lessee of the Great Northern Railroad's system of terminal elevators over the Northwest, the house has

for many years handled a substantial proportion of the grain trade over the territory. Mr. Thomson was a warm personal friend of the late James J. Hill and was associated with him in some of his enterprises. He was for a number of years a director of the Great Northern Railroad, being rated as one of the heaviest individual stockholders in that system. He was also a director of the North American Telegraph Company, and of the First National Bank of Duluth. His son succeeded him on the bank's Board at its last annual meeting. He was besides one of the largest stockholders in the Kelley-How-Thomson Company of Duluth. Mr. Thomson is credited with having largely laid the foundation of his fortune through getting in early upon the iron mining developments in northern Minnesota. He was at one time interested in the great mines controlled by the Rockefeller interests. The president of the Duluth Board of Trade, H. F. Salyards, and G. G. Barnum, Sr., one of his oldest friends, and several Duluth business men, paid their respects to the deceased in attending the funeral at Peterborough, Ont.

A biography of Mr. Thomson would not be complete without reference to his unostentatious charity. Only his closest friends had any knowledge of the extent of his benefactions, they being all under cover. It was said that no deserving appeal was ever made to him in vain, and he was known to have helped many lame business ducks over the rough spots in the course of his long career in the grain trade.

Officers and directors of the Duluth Board of Trade are keeping a close tab on threatened restrictive legislation at Washington and at St. Paul. They feel sanguine that much of the misunderstandings have been cleared away as a result of conferences between legislative committees, the grain commission houses' representatives and farmers. It is not now thought here that any legislative enactments that would disturb the marketing machinery of the grain trade will be carried through. In the conferences at St. Paul, the Duluth men made it plain that their grain board is perfectly willing to admit the co-operative societies to membership on the same conditions as govern other applications. They, however, urged their views against any legislation that would tend to make the grain exchanges public markets. Grain operators on this market have asserted that they are not averse to any Federal restrictions becoming operative that would result in the prevention of excessive speculation as they believe that to be inimical to the best interests of the trade.

A quiet, but at the same time important demand for feeds in the aggregate has been reported recently by the White Grain Company. That is regarded by R. M. White as indicating that the dairying and cattle raising industry has been gaining over northern Minnesota during the last year.

William Dalrymple, grain operator on the Duluth market, has begun a suit in the District Court to collect \$18,890 from the Nome Independent Elevator Company of Nome, N. D. The money was claimed to have been loaned the elevator company at 9 per cent interest on July 1 last and the obligation fell due on February 1.

Ernest A. Vivian, buyer for the Consolidated Elevator Company, has been elected a member of the Duluth Board of Trade to fill the vacancy caused through the elevation of W. W. Bradbury to the directorate.

An interesting development, as illustrating the great changes in handling and marketing conditions that have come about during the last few months, was reported by Robert Ham last week. He sold a car of mill oats at 18 cents a bushel, as compared with a sale in May last year of the same grade of oats, at \$1.02.

The Cargill Elevator Company has put its Elevator "M" and Annex "N" out of commission for the present owing to the slow movement of wheat. The Consolidated Elevator Company has put its Elevator "H" and Annex "I" in service to handle Canadian bonded grain. The Globe Elevator Company is continuing to handle a substantial proportion of the Canadian wheat being transferred for Minneapolis shipment.

Marriages of traders on the Duluth market have been quite regular events during the winter months. W. O. Falk, representative of C. C. Wyman & Co., and Ham Cook, of Gregory Cook & Co., recently returned from honeymoon trips.

Specialists in rye have found trade slow lately as a result of the drying up of the export demand that had been a prominent factor. No. 2 spot rye has sold off from \$1.63 to \$1.41 during the last month.

A substantial movement of oats has developed to this market recently from parts of South Dakota and southern Minnesota, and a run of corn has been started from the same territory. The elevator companies here have been offering attractive prices for oats, as they have contracts booked for Eastern ship-

ment at the opening of the lake navigation season. Up to 58½ cents was paid here for Yellow corn recently. Around 3,400,000 bushels of oats are now being carried in elevators at this point. The marketing of grain to the Duluth market from over a wider territory has been promoted through the freight rates changes made last year.

Shipments of Canadian bonded grain to Duluth elevators, the bulk of it for reshipment to Minneapolis millers, are continuing in unabated volume, over 125 cars being unloaded at the elevators on some days. The movement has been intensified through a recent order of the Canadian railroads refusing direct billings to Minneapolis from points of shipment and directing that the grain be transferred here. The prevention of Canadian freight cars going South from here was the reason for the issuing of the order. Several cars of that grain are being taken daily by Duluth milling companies for mixing purposes. They have been paying substantial premiums for it.

TOLEDO

C. O. BARNHOUSE - CORRESPONDENT

THE grain market has been quite active during the last month and prices have shown a comparatively wide range for all grains. Wheat ranged from \$2.05 on January 11 to \$1.75 on February 3; corn from 76 cents on January 12 to 62 cents on February 3; oats from 51½ cents on January 10 to 41 cents on February 3; and rye from \$1.63 on January 10 to \$1.42 on February 3.

The movement is as follows:

	Receipts:		Shipments:	
	This month	Year ago	This month	Year ago
Wheat	175,000	210,000	127,000	238,000
Corn	425,000	175,000	160,000	87,000
Oats	325,000	240,000	227,000	87,000
Rye	47,000	112,000	32,000	105,000

The flour and feed trade is showing more activity than it did previous to the turn of the year, but is still more or less stagnant. Business is possible only when customers' stocks are exhausted. Buyers are loathe to stock up for two reasons: First, the course of the market during the coming few months is not at all clear; and secondly, if buyers considered flour a good purchase at present levels many would be unable to buy stocks of any considerable size on account of financial conditions. Flour production for the month is reported as 88,000 barrels or 44 per cent against 130,000 barrels or 65 per cent a year ago. Flour stocks, 12,000 barrels against 18,000 barrels a year ago.

There is no great accumulation of feed at this time. Movement is slow but mills are able to dispose of all they make.

Raymond P. Lipe and Jesse W. Young with their wives left on January 31 on a trip to South America. They expect to visit Chili, Argentine and Brazil. They will be gone until about April 1. C. S. Coup of the Northwestern Elevator & Mill Company, returned Saturday after a 30-day vacation in California.

John E. Delaney of E. W. Wagner & Co., Chicago, spent several days in the Wagner company's Toledo offices last week.

E. A. Spurrier of Spurrier Brothers, millers of Marysville, Ohio, visited the Toledo Produce Exchange on February 9.

Wm. Raabe of Raabe Brothers, grain dealers of Ft. Jennings, Ohio, and C. S. Young, grain dealer of Bowling Green, Ohio, were visitors on the Exchange floor on February 8.

The Toledo Produce Exchange lost a valued member and the city of Toledo a well-known citizen and philanthropist, when, on January 29, Frank I. King succumbed to a brief illness of bronchial pneumonia. His death came as a shock and a surprise to his many friends who were unaware of the critical nature of his illness. Mr. King was head of the grain firm of C. A. King & Co., which was founded by C. A. King, an uncle of his, in 1846, and has had a continued existence of 73 years. He was born in Paterson, N. J., in May, 1860. He came to Toledo at an early age and made his way while attending school by selling papers. On leaving school he entered the office of his uncle; in 1883 became a member of the firm and at his uncle's death in 1894 became head of it. He was a member of the Chicago Board of Trade and the Toledo Produce Exchange. He served as president of the latter organization four years. He was elected to the City Council in 1886 and served four years as its president. He was interested with the late John E. Gunckel in founding the Toledo Newsboys' Association and the building of the newsboys' home. He leaves four children, a son, Fred C., who was associated with his father in business, and three daughters.

LOUISVILLE

A. W. WILLIAMS - CORRESPONDENT

THE reports received from local elevator and grain men indicate that business continues slow as a whole, there being no especially good demand for grain, feed, hay or anything else just now. Millers are operating about half time on wheat products, and corn products are quiet. As a result of millfeeds being very cheap the manufacturers of sweet feeds are practically idle, as alfalfa is so high that it is impossible to sell manufactured feeds at less than about \$3 a ton over millfeeds today.

The elevator operators report that they are still handling very small quantities of grain, and that it has been a bad crop year since the opening last summer, as movement has been very light, and no one is carrying any more stock than they have to have.

Prices of hay and straw are weakening and offerings are far more liberal, as the farmers like to clean up by March, and be free to go ahead with their spring work. Demand is poor as a whole, as there is plenty of hay in all districts, and the jobbers are not meeting with much southern demand. For the past few days inquiries from farmers for prices paid, and offers at low prices have been rolling in fast, but there hasn't been much buying, as jobbers and dealers are not stocking even at attractive prices, unless they need it imperatively.

During the past few days there has been a good increase in demand for seed oats, which are selling at around 3 to 4 cents a bushel over standard grades. Indications are that a fair acreage will be put to oats this year.

All reports on growing wheat for Kentucky, Tennessee, Indiana, Ohio and eastern Missouri, indicate that the crop is in excellent shape, and has had an excellent growing winter. Prospects are said to be fine, although the acreage is not exceptionally large in either Kentucky or Indiana. There has not been much real freezing weather this year, and then a fair snow protection.

Edwin M. Ritter, of the Ritter-Hennings Company, dealers in hay, grain, feed, etc., in a recent statement said that due to the fact that country buyers were holding off until the last minute to place orders and then buying in light quantities for immediate shipment, the number of telegraphic and telephone orders received was greater than ever before in the history of the business. Today merchants are following the "light and often" policy. Stocks are low and while orders are for small amounts they are coming in more frequently, and there has been a nice increase of late.

In a recent decision by Judge Kirby, of the Jefferson Circuit Court, City Assessor Bristow is enjoined from charging over 15 cents a hundred for city taxes on grain, hay, seeds, tobacco, farm products, etc. Under the state law they are assessable as raw or unmanufactured product at 15 cents a hundred, but the city endeavored to assess them as merchandise at \$2 a hundred, which started a hot fight from the tobacco and grain men.

The Ballard & Ballard Company, of Louisville, soft winter wheat millers, have closed down their corn mill, and also the big feed manufacturing plant, and have announced that neither of these departments will be operated again until conditions show material improvement. The company was producing 31 products in the corn and feed manufacturing departments, and with three millfeeds had a total of 34 products besides flour to offer. In announcing the decision the company stated that it might be down for a few weeks or months, and again the plant might not resume for some years. The wheat plant has not been disturbed in any way, it being an entirely different unit.

The Ballard company is not the only one to have stopped production of corn products, the Wathen Milling Company, having closed down some weeks ago, announcing at that time that it would probably resume later, but the organization has been broken up, and it is doubtful whether the company will resume on the crop year.

At the Louisville Milling Company's mill the corn plant is operating 16 hours a day. The Louisville Cereal Mills Company, which is the oldest exclusively corn plant in the city, is operating full time, and reports that it has been forced to go outside and secure supplies to fill all demands, as it has a big trade extending from the Gulf to the Lakes, and also a fair export business.

The reason assigned to closing down such plants is that corn is so cheap that the feed demand for corn feeds is not good, and again country millers are supplying much local trade, on products made from corn that is cheaper than where it pays the freight rates to the larger cities, and back again in manufactured

form. Again, in the Western States corn is sold at less than Louisville mills can ship it in for, and this enables them to compete strongly for corn product business.

J. W. Morrison, of the Lexington Roller Mills, Lexington, Ky., was one of the principal speakers at a recent annual meeting of the Kentucky Credit Men's Association, at Lexington. This organization at its meeting announced that its policy was to be that of giving the country merchant and small business man greater consideration at the present time, this being largely due to the crop situation, especially tobacco, which has made it hard for the farmer to take care of his bills, and still harder for the country merchant.

C. Albert Edinger, of Edinger & Sons, local grain, feed and hay jobbers, with his cousin, E. C. Edinger, who at one time was connected with the concern, has established the Edinger Motor Parts Company, which has arranged to distribute all parts for all sizes of Continental Motors in Kentucky and Tennessee, and also handle the Signal line of motor trucks. Headquarters have been established at First and Broadway. Mr. Edinger is devoting a good deal of attention to the new concern for the time being, but will continue with the grain business as heretofore.

The Kentucky Feed & Grain Company has completed its new elevator and plant, and started operations in early January. This concern is equipped to produce a considerable quantity of sweet feeds.

SCALE REQUIREMENTS

To assure protection on loss and damage claims, under the provisions of I. C. C. Docket 9009, all new scale installations should conform to the rules suggested by the Interstate Commerce Commission. These provisions do not govern scales installed previous to the date on which the rules go into effect provided such scales meet the required tests for sensibility and accuracy. Last month we published that portion of the rules covering the operation of automatic scales. Herewith are given the rules on the installation of automatic scales. In succeeding issues will be published the rules for design of automatic scales and all rules for hopper and track scales.

INSTALLATION OF AUTOMATIC SCALES

1. Scales shall be installed in accordance with the manufacturers instructions and plans.
2. Foundations for automatic scales shall be substantially and sufficiently level so that at all times these scales will respond within the tolerance provided for in Sections I and IV.
3. There shall be not less than 18 inches clear space on at least three sides of the scale.
4. There shall be at least two inches clearance between any moving part of the scale and any part of the building.
5. Levers operating gates of bins, garners, weigh hoppers, shall not interfere with any part of the scale mechanism or hopper.
6. Where a scale is installed in the cupola, or is fed in any manner except from bins by gravity, there shall be a garner above the scale having a capacity of at least two drafts of the scale, preferably more.
7. Beneath the scale discharge door, when at its lowest point, there shall be a hopper, lined with sheet metal, having a capacity of at least one draft of the scale.
8. The discharge opening from any hopper underneath the scale shall be so located that the discharge door of the scale, when closing, cannot pick up any grain.
9. Access shall be provided so that every scale can be tested with standard test weights.
10. Scales should be so installed that they can be tested in operation; that is, facilities shall be provided to dispose of grain run through the scale during the test, and such provision shall in no manner introduce a hazard in the delivery of the grain to the car, and be equipped to permit of sealing.
11. No scale shall be enclosed in any housing. The scales shall be left readily accessible for cleaning, inspection and adjustment.
12. Where a scale is not installed on the permanent floor, ample permanent runways shall be provided around the scale.
13. Hoppers, garners and gates operated in connection with the scales shall be so constructed and maintained as to prevent leakage of grain.

ASSOCIATIONS

INDIANA GRAIN DEALERS AT INDIANAPOLIS

There will be no change of officers of the Indiana Grain Dealers Association the coming year, it being so decided at the annual convention of that body held in the Claypool Hotel, Indianapolis, late in January. President H. W. Reimann of Shelbyville, continues in office with John H. Morrow of Wabash, vice-president. P. E. Goodrich and G. G. Davis were selected for three-year terms on the Board of Directors.

An average attendance of dealers was present when President Reimann opened the first session with his annual address as follows:

It is indeed a pleasure to serve at the head of an organization whose members are willing at all times to do their bit, whether it be for the good of the Association or any other worthy enterprise.

The past year has indeed been one of ups and downs for the grain trade and for business in general. During the first six months prices advanced or were at least stationary, while during the last half of the year it has been one continuous procession of downward prices and especially so the last three months. Profits that were available during the first half of the year were quickly brushed aside during the latter half and in almost every instance the loss was greater than the gain.

It is not my desire to remind you of the many unpleasant business transactions you have participated in during the past year, but I wish to suggest that what-

you will later be addressed by a member of the firm selected. I cannot too earnestly urge that you avail yourselves of this service. The cost is very small as compared with the results obtained.

Not enough of us are taking advantage of the services offered through the Weights and Measures Department of our state. This service of testing our scales has been an indispensable asset of the grain man and has many times kept down the gossip which arises through the comparison of the out-in-the-weather scale with the up-to-date kept-in-the-dry scale. We should stand behind this department and in every way possible assist Mr. Miller, the commissioner of this department, and his associates in getting everything necessary to the accomplishment of their duties. This department should be very highly commended for its splendid and efficient services.

Our membership at present stands at about 400. This is far too small. Our booster drive was fairly successful, but did not result in the increase that your officers had hoped for. Every Indiana grain dealer should be a member and I urge you to assist in getting your neighbors into our Association. We expect to put on another drive and hope to get in every grain dealer now outside of our organization.

"If you will work and think and smile,
In Nineteen-Twenty-One
The clouds and storms will drift away
As the mists before the sun."

After appointment of committees, Secretary Chas. B. Riley read his annual report as follows:

Another year has come and gone, and many are glad to forget 1920 as a business year and start with determination to make this year one that will at least, in part, restore the lost capital sustained in 1920.

The Association, like individuals, has had its share of trouble in the matter of keeping in financial standing, as almost all items of expense have increased greatly, some doubled and others increased 25 to 35 per cent.

Membership

We started a year ago to increase our membership and a number of our members entered into the contest and secured a few members. Bert A. Boyd was the successful worker for new members and will enjoy the President's prize offered to the man who secured the greatest number of new members. If all our members would do a little work in bringing in new members, we would soon have one of the strongest Associations in numbers as we are now in association spirit and loyalty to the fraternity.

Arbitration

This is one of the best features of the Association, and has been indulged in more during this year than former years. We have had three cases in which the Arbitration Committee was unanimous in decision and two out of the three have settled by paying the award strictly on time. One has so far declined to pay the award and the matter is before the Board of Managers to discipline or expel the refractory members who have so far declined to make the payment which was due December 31.

Section 13, of the Arbitration Rules, reads, "Neglect or refusal to submit a case in controversy to the Committee on Arbitration, or to comply with the award of the Committee, shall be deemed unbusinesslike conduct and the penalty therefor may be a fine, suspension or expulsion, as the Board of Managers may direct."

It would seem that men who wish to do right would find above rule a good one and as the Association can go no further toward a settlement of a controversy, the rule most nearly fitting the case would be employed.

Claim Department

We have not had so many claims to file during the past year as formerly, possibly because our members have had better cars in which to ship and because wheat, which gives rise to the greater losses in transit, has not been shipped in the same quantity this year as formerly. We would like especially to request our members to avail themselves of our Claims Department, many do not file their claims themselves and when filed by others they may be too busy to follow them up. We have been very well treated by a number of the carriers in the matter of handling and paying claims, but this is not the case with all by any means.

Legislation

Our committee on legislation, composed of P. E. Goodrich, James W. Sale and Elmer Hutchinson, have been in consultation with the Legislative Committee of the Indiana Federation of Farmers' Associations on a proposed Pure Seed Bill, which is to be introduced at the session of the General Assembly; other measures will be introduced in which we are now or will be greatly interested and while talking about legislation and the committee's work, I might say that this committee should be financed independent of the general funds of the Association, as the funds are not sufficient to take care of all such outside work. A little from a great many makes a heap for the few.

Farm Bureaus

The interests of the farmer and the grain dealer are mutual in most things and this Association has during its entire history zealously labored with the agricultural interests of the state to promote the cause of agriculture. We have spent hundreds of dollars in an effort to get better grading, better transportation service and rates and in many other ways made that cause the cause of this Association.

We are to have with us a direct representative of the Farmers' Federation, in fact its new secretary, Senator Maurice Douglass, who is to address us and I am sure our members will find him imbued with a spirit of fairness and capable of doing big things for his people and ready to co-operate with us, and we are sure our people will be ready to join hands with his organization for the accomplishment of mutual, friendly and profitable relations.

Local Meetings

We had quite a number of local meetings during the summer and fall, but the attendance was limited and we have not been encouraged lately by the effort in that direction. Many of our people have failed to make much money this year and some do not see a very bright future before them, hence lax on attendance at the local meetings. It is our personal desire to have as many meetings as possible if the members desire them, so all you have to do is to ask us to make calls for such meetings as you think will be profitable.

Following the reading of his report Secretary Riley announced that there were 200 grain dealers

in the state not members, but eligible to membership and that Bert Boyd had been awarded the prize for securing the greatest number of new members during the year.

C. A. Rouse, general agent of the Erie Railroad at Tipton, Ind., made an address on the subject "The Condition of the Country Elevator Man as Viewed by his Banker."

Senator Douglass, secretary of the Indiana Federation of Farmers Associations spoke upon general business conditions. He made the fact very plain that the interests of the grain dealer and farmer were mutual and that they each had broad opportunities for giving service.

A general discussion followed over the question of handling side lines by the country dealer, led by P. E. Goodrich, H. H. Deam, President Reimann and others. It was brought out that nearly all carried side lines and had found them profitable. These lines included for the most part, coal, cement, building materials, feeds, seeds and flour.

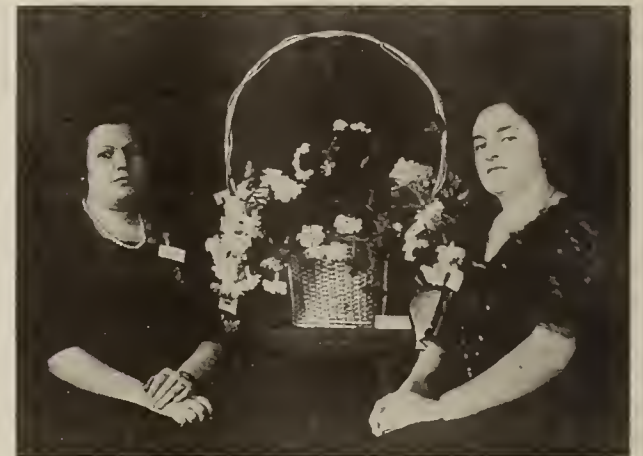
F. E. Watkins, first vice-president of the Grain Dealers National Association made a short talk on the trade rules of the National organization and suggested that as all dealers were now working under these rules it would be well to become as familiar with them as possible.

Representatives of terminal markets were called upon as to market conditions and Mr. Purcell responded for Buffalo, Mr. Custer for Cincinnati, Mr. Watkins for Cleveland and Mr. Schiffin for Chicago. An adjournment was then taken until the following morning.

SECOND DAY'S SESSION

The second day's session was largely taken over by discussion of merits and demerits of Future Trading in Grain, and the presentation of an important paper by Ben E. Clement of Waco, Tex., president of the Grain Dealers National Association.

Fred E. Vawter of Indianapolis, opened the ses-



FRANK A. WITT'S FLOWER GIRLS
They distributed flowers to the dealers

sion by presenting the views on future trading of a Southwestern miller who had prepared a paper to be read at the meeting.

The principal speaker in defense of future trading was Wm. Simons of Sawers Grain Company of Chicago, who presented the subject very clearly and showed how producer and consumer alike as well as all handlers of grain were benefited by the system that had gradually grown up as boards of trade.

After he had finished Mr. Simons was kept busy for some time replying to questions from dealers present who desired enlightenment.

H. A. Kurrie, president of the Monon Railroad next spoke on "Railroads, Their Present Condition and Future Prospects."

A very delightful few minutes was then spent in listening to Governor Warren T. McCray who had but lately assumed office and who ran over from the capital to greet his old friends among the grain dealers. The governor spoke encouragingly of business conditions and looked for more constructive legislation that would help, and not hinder business.

A. H. Lindup of Indianapolis who the Board of Directors of the Association had chosen to prepare a uniform system of accounting for use of members gave a short talk describing the system.

Chairman E. K. Sowash read the report of the Committee on Resolutions which was adopted as read:

RESOLUTIONS

Sympathy and Condolence

Whereas, our highly esteemed friend and brother, Frank M. Pence, of Pence, Ind., who has long been a loyal member of this Association has passed on leaving a loving wife and son, be it

Resolved, that we extend our sympathy and condolence to the family of the deceased.

Grain Exchange Legislation

Whereas, the grain exchanges and boards of trade of this country are being falsely charged with unduly depressing the market values of grain, and many different laws regulating and prohibiting these exchanges are being proposed to Congress by persons entirely ignorant of our grain marketing methods and the true functions of our grain exchanges, and

Whereas, these well regulated public trading places



PRESIDENT H. W. REIMANN

ever your losses and unsatisfactory experiences may have been, forget them one and all (except for the many lessons they may have taught, which will be beneficial in the future) and remember the successes and pleasant experiences. Face the future with a determination to make your business a success, not only financially, but through rendering a desirable service to your many customers.

Personally I feel that the word "Service" from now on is going to be one of the greatest words in the English language, especially as it pertains to business.

During the past years business has come to all of us. Now we have to go after business and only as we give service will we be able to grasp business. The salesman, who in the past has done a wonderful business, will fall by the wayside, unless he is on the job every minute of the day dispensing service at all times. The opportunity is before us and we can and will put the grain trade on a higher basis than the high one which it has already attained.

We must and should be optimistic and fight the pessimist at all times. Business will come back, and we can assist it by being optimistic, but we can also everlastingly drive it to the lower depths, by spreading all about us the continuous fear of the future. Let us all take our losses and start all over with renewed vigor.

During the past year, first, the railroads were turned back to their rightful owners and the service rendered has speedily improved and we are encouraged to believe that it will continue to improve. The present rates are high and thought by many to be too high. If this be true, it is only a matter of time until an adjustment will be made. For service rendered, they are very cheap compared with what we have recently experienced.

Second: Our grain business has been handed back to us by the Government. All restrictions were lifted and we are now permitted to operate as previously. As much as some of us may have resented the restrictions under which we were obliged to operate, I am satisfied that the experience was beneficial to us all. More of us now take into consideration the cost of handling all kinds of grain and our business as a whole is being run on a more systematic basis.

Right here, I wish to call your attention to the resolution passed at the mid-summer meeting, which authorized your Board if they deemed it advisable to select a firm to audit the books of the members of the Association who desired an audit. This has been done and

CONVENTION CALENDAR

February 15-17—Minnesota Farmers Grain Dealers Association, Minneapolis.
February 23-25—Kansas Farmers Co-operative Grain Dealers Association, Hutchinson.
March 1-3—North Dakota Farmers Grain Dealers Association, Jamestown.
May 10, 11—Illinois Grain Dealers Association, Peoria.
May 18, 19—Oklahoma Grain Dealers Association, Oklahoma City.
May 24-26—Kansas Grain Dealers Association, Kansas City, Mo.
June 19, 20—Wholesale Grass Seed Dealers Association, St. Louis, Mo.
June 21-23—American Seed Trade Association, St. Louis, Mo.
September 6, 7—National Hay Association, Chicago.

SECRETARY RILEY SEEKS HEALTH

On account of illness, Chas. B. Riley, secretary of the Indiana Grain Dealers Association, and E. K. Shepperd, manager of the Indianapolis branch of Cleveland Grain & Milling Company, are on their way to Miami, Fla., for a month's vacation. Mr. and Mrs. Frank C. Williams will accompany them. Mr. Williams was formerly connected with the grain business at Dayton, Ind., and is now the secretary-treasurer of the Washington Bank & Trust Company, of Indianapolis.

DIFFERENTIAL ON SACKED GRAIN AND PRODUCTS

Secretary Chivington of the American Corn Millers Federation has received the following telegram dated February 8, 1921, from F. L. Murphy, traffic manager of the United States Shipping Board:

"The United States Shipping Board has adopted the following resolution, effective February 10, 1921:

"Resolved, That the rates on water on the following products to-wit.: Barley in bags, corn in bags, cornmeal in bags, corn and rye flour in bags, grits in bags, hominy feed in bags, oatmeal in bags, pot barley in bags and starch and dextrine in bags, shall bear the difference that sacked flour does to bulk flour."

This decision of the Shipping Board ends a determined fight waged by the American Corn Millers Federation, that began a year ago, when a parity of ocean rates on grain and grain products was urged.

In October the Shipping Board granted a concession to wheat flour, reducing the differential over grain from 25 cents per hundred to 5 cents per hundred, but corn products were not included. The American Corn Millers Federation then renewed its demands and after two hearings granted by the Shipping Board, one November 4, 1920, and January 4, 1921, when strong committees insisted that the ocean rates on corn products be restored to the basis of wheat flour which basis was always enjoyed by these products previously, the members of the new Board passed the foregoing resolution.

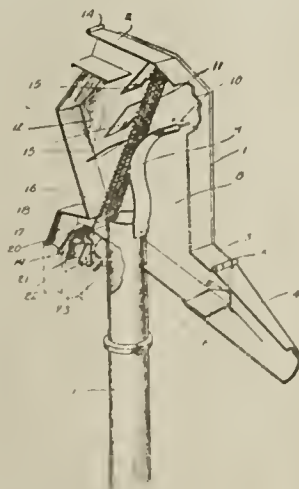
It is understood that the Board of Directors of the American Corn Millers Federation will in the near future, pass a resolution urging all members to support the American Merchant Marine by using American bottoms whenever it is possible to do so.

GRAIN TRADE PATENTS

Bearing Date of November 30, 1920

Grain separator and grader.—Halbert C. Wallace, Kansas City, and Otto N. Gredell, Winwood Lake, Mo. Filed February 14, 1920. No. 1,360,834. See cut.

Claim: A grain separator and grader comprising a casing having a grain discharge port at one end and an air discharge port at the other, a reticulated haffle in the casing between the grain discharge and air discharge ports to divide the casing into a grain



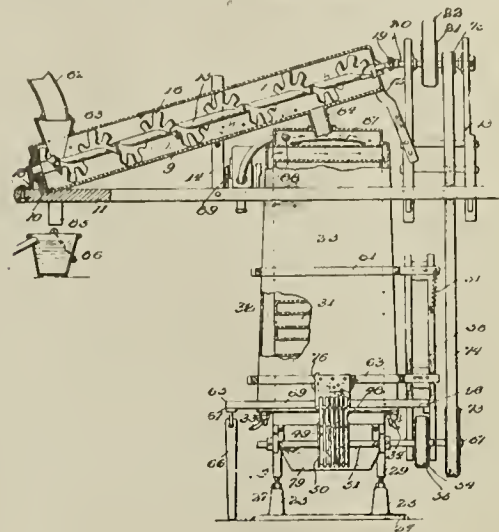
chamber and a grader chamber, a pneumatic conveyor pipe discharging into the grain chamber adjacent to the baffle, a deflector for directing the grain from the

pneumatic conveyor toward the baffle, deflectors within the grader chamber, and grading devices below and in communication with the grader chamber.

Grain cleaner.—Archibald Kenneth MacLean, Ottawa, Ont., Canada. Filed September 2, 1919. No. 1,360,556.

Grain drier.—Edward M. Warrenfeltz, Funkstown, Md., assignor of one-fourth to Leon R. Yourtee, Hagerstown, Md., and one-fourth to Charles H. Dentler, Funkstown, Md. Filed June 23, 1919. No. 1,360,336. See cut.

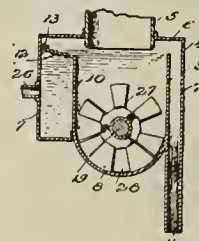
Claim: The combination with a casing yieldably mounted for vertical movement, of spaced transverse drying flues mounted therein, a hopper under said casing, means for feeding grain through the casing and between the drying flues into the hopper,



swinging gates controlling the flow from the casing to the hopper, yieldable means for holding the gates closed, means operatively connected with the feeding means to cause the gates to open, and means actuated by the movement of the casing to control said gate-opening means.

Grain cleaner.—Edward M. Warrenfeltz, Funkstown, Md., assignor of one-fourth to Leon R. Yourtee, Hagerstown, Md., and one-fourth to Charles H. Dentler, Funkstown, Md. Filed June 23, 1919. No. 1,360,335. See cut.

Claim: The method of separating grain from foreign matter consisting in establishing a still body of wash water feeding the grain containing foreign matter on to the surface of said body of water whereby



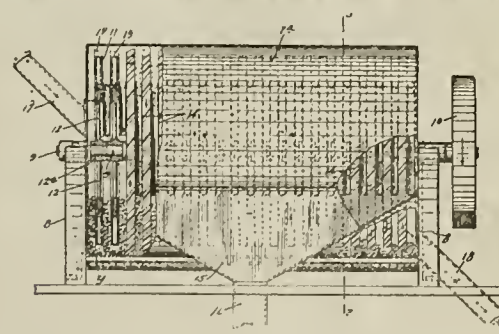
the grain gravitates to the bottom, and maintaining a continuously moving film across the surface of said wash water by feeding additional water thereto at an obtuse angle to the surface of the body of wash water whereby the theoretically advancing edge presented by the incoming water carries before it the film already established on the body of wash water without appreciably disturbing the surface tension.

Bearing Date of January 4, 1921

Percentage feeder.—Joseph L. Willford, Minneapolis, Minn. Filed June 16, 1919. No. 1,364,168.

Grain separator.—Clarence W. Carter, Minneapolis, Minn. Filed March 21, 1919. No. 1,364,247. See cut.

Claim: A separator of the kind described comprising a container for the material to be separated, and a separating plate movable edgewise upward through the body of material in said container and provided in its face with pockets that are always closed at their



inner side and open at their outer sides and are arranged to receive certain kinds of material from the commingled body and to discharge the same at a point higher up but at the same side of the plate at which they were received into said pockets.

CORN PRODUCTS COMPANY IN EUROPE

Negotiations have been concluded, it is reported, by the Corn Products Refining Company for the purchase of plants in three European countries: England, France and Germany. The new undertaking involves several millions of dollars. A comprehensive program has been laid out by the corporation to invade Europe markets on a big scale in order to overcome the high duties exacted for doing business between the United States and foreign countries.

throughout their 70 years of slow development have always sought to supply the world with dependable information regarding the needs and the crops of the world, and have striven to establish the sanctity of contracts to the end that the influence of all buying and selling on the exchange shall be accurately reflected in the market price, and

Whereas, the present machinery for establishing the market values of grain makes possible the expeditious marketing of grain at any time and on a narrower margin than any other commodity is marketed, be it

Resolved, by the Indiana Grain Dealers Association in convention assembled at Indianapolis, this 21st day of January, 1921, that we believe the grain exchanges afford the most economical, the most efficient and the most equitable method of marketing grain yet devised, and we would consider it an economical blunder of grave import to the entire world for Congress to attempt to regulate or abolish the grain exchanges, without first making a careful study of our well established grain marketing machinery and devising some efficient substitute.

Discretion in Selecting Sidelines

Whereas, many country grain dealers in their efforts to serve their communities have taken on side lines already carried by others and started fights which have been very expensive and of long duration, be it

Resolved, that we recommend that members always study carefully not only the needs of their communities, but also the interests of established merchants before branching out into new lines of business.

Recommend Claim Department

Whereas, the Association maintains an effective department for the collection of freight claims and only a small number of our members patronize same, and

Whereas, it is well known that the carriers are at most times pleased to negotiate settlements through such a department, and

Whereas, many of our members are following the old custom of letting their market correspondent, commission man, broker or buyer, file their claims and such parties not making a special feature of such business are glad to have the claims handled by our Department; therefore be it

Resolved, that we recommend to all who can consistently place their claims with the Claims Department of the Association to do so, believing that in the end they will save money, avoid delay and much annoyance.

Endorse Emergency Tariff Bill

Whereas, the Emergency Tariff Bill now pending before Congress provides for much needed protection to our grain growers and manufacturers of grain products, be it

Resolved, that we urge the Indiana representatives in Congress to support the bill and use their earnest efforts to secure its enactment into law.

Reduction of Freight Rates

Whereas, the prevailing prices for grain leaves little reward to the farmer for his arduous labor in producing the food of the nation, be it

Resolved, by the Indiana Grain Dealers Association in convention assembled at Indianapolis, this 21st day of January, 1921, that we appeal to the Interstate Commerce Commission to readjust the freight rates on grain downward.

Contrast Relations Between Railways and Labor

Whereas, the railways of the country are incumbered with unfair contracts which compel them to pay wages to many employees that are not earned, be it

Resolved, that we appeal to the Federal Railroad Labor Board in the hearings now being held to adjust the contract relations between the railways and their labor, so as to insure a full day's work for a day's pay, and to avoid the employment of labor in excess of the actual requirements of the work in hand.

Partial Payment of Railway Guarantee

Resolved, that we ask the representatives of Indiana in Congress to support legislation which will allow the partial payment by the U. S. Government to the railways on account of monies due them under the six months' guarantee.

The meeting then adjourned *sine die*.

NOTES

The most popular part of the Board of Trade Building between 11 and 1 o'clock was the offices of Lew Hill Grain Company where this hospitable grain firm served luncheon.

All the latch strings were out at all Indianapolis grain offices during the meeting and all grain firms dispensed marks of hospitality in one form or another.

Identification badges were as usual furnished by the Grain Dealers National Mutual Fire Insurance Company, those in charge of the registration being C. B. Sinex, Harry Keiner, and Miss Margaret Helman.

The Buffalo market was represented by E. E. and I. W. McConnell of McConnell Grain Corporation, S. E. Provost of Eastern Grain Mill & Elevator Corporation, J. G. McKillen of J. G. McKillen, Inc., M. Purcell of Armour Grain Company.

Those journeying from Chicago included William Simons of Sawers Grain Company, Philip H. Schiffin of Philip H. Schiffin & Co., Wm. Tucker with Lamson Bros. & Co.

The Toledo delegation included W. W. Cummings of J. F. Zahm & Co.; E. A. Doering and John W. Luscombe with Southworth & Co. F. E. Watkins of Cleveland Grain & Milling Company came from near by Cleveland.

W. F. Morgan of Columbus represented John T. Fahey & Co. of Baltimore at the meeting.

Building supply interests were looked after by T. L. Burrell of Burrell Engineering & Construction Company of Chicago, P. G. Hunker, Jr., of Kennedy Car Liner & Bag Company of Shelbyville, Ind.; C. E. Flora and J. B. Van Voorst of Reliance Construction Company of Indianapolis, Ind.

Receivers from Cincinnati were Dan B. Granger and L. W. McLaughlin of Dan B. Granger & Co.; John H. Dorsal of Dorsal Grain Company; A. C. Gale of A. C. Gale Grain Company; Ralph H. Brown of H. W. Brown & Co.

Bert A. Boyd of Bert A. Boyd Grain Company was host to a very pleasant little theater party at Keiths the first night of the convention.



CANADA

The Farmers Mutual Grain & Elevator Company, Ltd., has been incorporated at Winnipeg, Ont., capitalized at \$250,000.

The capital stock of the Saskatchewan Elevator Company, Ltd., of Regina, Sask., has been increased from \$250,000 to \$500,000.

Farmers around Rainy River, Ont., have organized a co-operative company and will handle grain, etc. The company has established a grain cleaning warehouse there.

Notwithstanding that Participation Certificates issued by the Canadian Wheat Board provide that no claim made under or in respect thereof would be paid unless such claim was made and certificates surrendered to the Board on or before the 31st day of December, 1920, producers and others still holding these certificates are requested to immediately surrender same to the Board, when due consideration will be given to the matter of making payments thereon.

IOWA

The Pothast Bros. Grain Company is succeeding in business at Van Cleve, Iowa, by Pothast & Glidewell.

Additional storage room is being built to the plant of the Talbott Grain Company located at Osceola, Iowa.

The Farmers Elevator Company of Coon Rapids, Iowa, has been dissolved and the business discontinued.

The Farmers Co-operative Company has completed a new elevator of 20,000 bushels' capacity at Creston, Iowa.

The elevator of the Farmers Exchange at Centerdale, Iowa, is to be improved and equipped with new machinery.

The new 31,000-bushel elevator of O. A. Talbott & Co., at Tingley, Iowa, has been completed and put into operation.

A new grain elevator is to be built at Gifford, Iowa, by J. F. Weaver, replacing the one which was destroyed by fire.

Remodeling and repairing has been done to the elevator at Morningside (Sioux City p. o.), Iowa, owned by John Reid.

E. & P. Kirchner have completed a new elevator of 15,000-bushels' capacity at Cumberland, Iowa, and will operate same.

Austin & Hartwig of Williams, Iowa, are to discontinue their grain business there. They have dissolved the partnership.

A building at Algona, Iowa, has been purchased by the Algona Co-operative Company. The company will be used as a grain warehouse.

Frank Orton is named as one of the incorporators of the Farmers Elevator Company which will operate at Kennedy, Iowa. The firm is capitalized at \$30,000.

A wheat and corn machine is being installed at Des Moines, Iowa, for the Des Moines Elevator & Grain Company. The new sacking plant has also been completed.

The business of Macy, Awtry & Co., grain and livestock dealers of Sully, Iowa, has been purchased by the Farmers Association. Possession was given the new owners on February 15.

A Randolph Grain Drier has been installed in the plant of the Larchwood Co-operative Grain Company of Larchwood, Iowa. The drier operates with direct heat from the coal furnace.

The Albers Commission Company's elevator at Adair, Iowa, has been purchased by Wm. Wheeler, who formerly operated elevators at Crescent City and Melvin, Ill. Mr. Wheeler has sold his Illinois property.

Construction work is nearly completed on the new 25,000-bushel elevator of the Farmers Co-operative Company of Lost Nation, Iowa. The Burrell Engineering & Construction Company of Chicago, Ill., had the contract.

The Iowa Corn Products Company of Des Moines, Iowa, has its new plant now under roof and the machinery is on the ground ready to be installed. The plant will be ready for operation about May 1. The first unit will have capacity for grinding about 2,500 bushels daily; the ultimate capacity will be 10,000 bushels daily. The capacity of the elevator

is 150,000 bushels. The Folwell & Ahlskog Company of Chicago has the contract. The general offices of the company are in the Hubbell Building. The officers are: O. J. Meredith, president; A. N. Heggen, vice-president; R. B. McConlogue, secretary; J. F. Fogerty, treasurer; T. C. Cessua, chairman, Board of Directors.

OHIO AND MICHIGAN

James Pence is erecting a new elevator at Sidney, Ohio.

The Langenbacher grain and bean elevator at Lansing, Mich., has been purchased by C. L. Seeley.

The Farmers Co-operative Elevator Company of Fowler, Mich., is now under the management of D. G. Dakin.

The capital stock of the C. A. Powers Grain Company of Genoa, Ohio, has been increased from \$20,000 to \$30,000.

The capital stock of the Hancock County Co-operative Elevator Company of Findlay, Ohio, has been increased from \$30,000 to \$75,000.

The partnership of Miller & Converse of Degraff, Ohio, has been dissolved. The business will be conducted under the name of L. W. Miller & Sons.

The new 30,000-bushel iron clad elevator of the Eagle Grain Company at Hoytville, Ohio, has been completed. It is equipped with a gasoline engine.

A new 35,000-bushel elevator has been completed at Elida, Ohio, for the Farmers Equity Exchange Company. The company is capitalized at \$100,000.

The Farmers Co-operative & Grain Produce Company of Blissfield, Mich., has purchased two elevators: The Walper Elevator at Blissfield and the Nachtrieb Elevator at Ogden.

The new 40,000-bushel elevator of the Thurston Grain Company at Thurston, Ohio, has been completed; its equipment includes modern machinery for handling ear corn and other grain.

Work has been completed on the 40,000-bushel iron clad elevator of the Farmers Co-operative Company at Carey, Ohio. The equipment of the plant includes: A Smith Sheller; two Monitor Cleaners; Fairbanks Morse Hopper and Wagon Scales; Western Manlift; Fairbanks Morse electric power; two distributors; three stands elevator legs; and Western transmission machinery. The Reliance Construction Company had the contract.

The Hancock Co-operative Elevator & Supply Company's new elevator at Findlay, Ohio, of 30,000 bushels' capacity has been completed; there is also storage room for 2,000 bushels ear corn. The plant is equipped with Western and Monitor Cleaners, Western Sheller, Fairbanks-Morse Hopper and Wagon Scales, Western Manlift, Fairbanks-Morse electric power, Western Distributor and Western transmission machinery. The Reliance Construction Company did the work.

INDIANA

The Farmers Elevator Company of La Porte, Ind., has dissolved as a corporation.

W. W. Moss is succeeded as head of the Logansport Elevator Company of Logansport, Ind., by H. D. McDonald.

The Farmers Grain & Supply Company has sold its elevator situated at Camden, Ind., to the Urmssten Grain Company.

The Edwardsport Elevator Company's elevator at Edwardsport, Ind., has been purchased by John Wahl. He will not operate it, however.

W. W. Busenbark's interest in the N. Busenbark Grain Company of Crawfordsville, Ind., has been purchased by his son, Newton Busenbark.

James R. Barr, Samuel W. Grant and Peter Barr have incorporated the Richland Grain Company of Earl Park, Ind. Its capital stock is \$600,000.

A grain elevator is to be erected at Warsaw, Ind., for the Silver Lake Elevator Company. The concern will build on the site of the Ira Burk Mill which it purchased.

The elevator at Cates, Ind., owned by Freeman Knowles has been purchased by H. R. Conover. Mr. Knowles purchased the elevator last June from the Cates Grain Company.

A new house has been built at Oxford, Ind., for the Oxford Grain Company. The construction work was in the hands of the Reliance Construction Company. The elevator is equipped with a Western Sheller and Cleaner; Fairbanks-Morse Wagon Scale;

2,000-bushel automatic scale; Western Manlift; electric power; dust collectors; and Western transmission machinery.

Otto Leforge and Cecil Wallace's interest in the Boyleston Elevator at Frankfort, Ind., has been purchased by Earl Ogle. Mr. Ogle and C. W. Minor are now sole owners of the plant.

The H. O. White Grain & Hay Company of Monroeville, Ind., has been closed down by H. O. White. He will take charge of the Equitable Exchange which owns the old Niezer Elevator there.

To deal in grain, flour and feed, the Plymouth Milling & Sales Company was incorporated at Plymouth, Ind. F. E. Jacoby, S. M. Welch, C. Switzer, E. S. Kitch and A. H. Eversole are interested.

A 25-horsepower gas engine has been installed in the plant of the Goodrich Bros. Hay & Grain Company of Jolietville, Ind., replacing the steam plant. The firm will install a feed mill later on.

W. M. Moss is succeeded as general manager of the Logansport Elevator Company of Logansport, Ind., by E. D. McDonald. John Miller is president of the company and C. Q. Palmer, secretary-treasurer.

Geo. Brown is president; Arthur Denham, vice-president; and Wm. Weiler, secretary-treasurer of the Union Center Co-operative Equity Union Exchange of Union Center, Ind., which will conduct a grain elevator there. The firm is capitalized at \$40,000.

A new 40,000-bushel elevator is being erected at Colfax, Ind., by J. C. Jordan. He will operate as the Midway Elevator. The plant is equipped with a Western Sheller, cleaner, Fairbanks Oil Engine, hopper and wagon scale, Western Manlift, two distributors, three stands elevators, grinder, clipper cleaner and Western transmission machinery.

EASTERN

The warehouse at Essex, Conn., formerly conducted by the Reynolds Company, is now operated by the Meech & Stoddard Company of Middletown.

Nicholas Palmer, Geo. W. Kelsey, and others have incorporated the Berkshire Flour & Grain Company of Pittsfield, Mass. The firm is capitalized at \$120,000.

E. A. Anelli, C. H. Watts, and W. T. Harding have incorporated as W. T. Harding at Manhattan, N. Y., capitalized at \$50,000, and will handle grain, sugar and food.

The United Dairy & Grain Corporation has been incorporated at Stepney (mail to Stepney Depot), Conn. Alfred S. Edwards, Samuel H. Green and Chas. E. Miller are interested.

Geo. S. Reed, Harry G. Reed and John Black have incorporated the H. G. Reed Company of Trenton, N. J. The company will handle grain. The capital stock amounts to \$100,000.

The Farmers Exchange has been incorporated at Millinburg, Pa., capitalized at \$59,000. The company has erected a building of nine carloads' capacity and an elevator and warehouse.

To conduct a general grain, agricultural and grocery business, F. H. Kelly & Co., Inc., have been incorporated at Madrid, N. Y., capitalized at \$50,000. F. H. and L. E. Kelly and E. G. Rice are interested.

The 1,000,000-bushel Erie Elevator at Jersey City, N. J., is no longer to be conducted by the Erie Company, but will be operated under the management of the Long Dock Company, which is controlled by the Erie Railroad Company.

Charles Kennedy & Co., grain dealers of Buffalo, N. Y., have purchased the plant and real estate of the Victor Milling Company of Victor, N. Y. The consideration was \$90,000. A new company is being formed to operate the mill which has a capacity of 500 barrels.

A company known as the Producers Warehouse & Elevator Company has been organized at Buffalo and Syracuse, N. Y., by the New York State Grange League Federation. The firm is capitalized at \$450,000. The company has established feed mills at Buffalo and Syracuse.

The 50,000-bushel elevator and feed warehouse, together with stock in trade, of the F. F. Woodward Company at Fitchburg, Mass., has been purchased by the E. A. Cowee Company of Worcester. The retail department, conducted as the Fitchburg Grain Company, is included in the sale. The Cowee firm

— was founded in 1850 in West Boylston and was incorporated in 1912. H. Arnold Bertram, treasurer and general manager of the firm, will be active manager of the plant.

The Central Elevator Company of Pittsburgh, Pa., has completed its new 135,000-bushel elevator. It is equipped with a car puller, Western Sheller, Western Cleaner, six ton platform scale, two 2,000-bushel Howe Hopper Scales, two legs, shipping spout, car shovel and steel track shed. The Burrell Engineering & Construction Company had the contract.

ILLINOIS

Overhauling and repairing has been done to the elevator of Howard Cooper at Rochelle, Ill.

Waldschmidt & Schneider have purchased J. R. Wagner's elevator property at Metamora, Ill.

The grain business of Porch & Porch at Cullom, Ill., has been purchased by J. F. Schumacker.

The Henkle Grain Company of Beason, Ill., has repaired its elevator and equipped it with a new dump.

To build and operate a grain elevator, the Farmers Elevator Company has been organized at Griggsville, Ill.

The capital stock of the Farmers Grain Company of Fairbury, Ill., has been increased from \$30,000 to \$45,000.

A local co-operative grain and farm supply company at Plainfield, Ill., has completed a new \$50,000 elevator there.

E. S. Lyons has torn down his elevator at Colfax, Ill., which he recently purchased from the Farmers Grain Company.

W. J. Sullivan has repaired his elevator at New Holland, Ill. Ballinger & McAllister of Bloomington did the work.

B. E. Hamilton has completed a small vitrified tile elevator at Campus, Ill. The elevator has capacity of 6,500 bushels.

Gus Richardson has purchased the grain, feed and hay business of Walter McGinnis of Neoga, Cumberland County, Ill.

W. H. Casselberry succeeds A. C. Durby as manager of the Nokomis Farmers Co-operative Grain Company of Nokomis, Ill.

The Farmers Grain & Merchandise Company of Stronghurst, Ill., is now under the management of G. W. Howell of Carman.

The Farmers Co-operative Grain Company of Heyworth, Ill., has secured the services of E. E. Bumpus as manager of its elevator.

Electric power has been installed in the elevators of the Carter Grain & Lumber Company at Dayton, Wedron and Sheridan Junction, Ill.

Farmers around Lenzburg, Ill., have made plans for starting a co-operative elevator company. The concern will either build or buy an elevator.

The C. B. & Q. Railroad's 75,000-bushel elevator at Montgomery, Ill., has been completed. The Burrell Engineering & Construction Company had the contract.

The elevator and business of the Bonfield Grain & Lumber Company at Bonfield, Ill., has been purchased by Elmer Taylor of Goodrich. The consideration was \$30,000.

Farmers around Antioch, Ill., have reorganized the Farmers Grain Company there into a co-operative concern. The capital stock has also been increased by \$30,000.

The Mansfield Ford Grain Company's elevator at Lake Fork, Ill., has been purchased by the Lake Fork Farmers Co-operative Elevator Company of which C. F. Scott is manager.

A new elevator was recently completed at Galesburg, Ill., for the Farmers Elevator Company. The elevator is of reinforced concrete with capacity of 50,000 bushels and is electrically operated.

Capitalized at \$40,000, a farmers co-operative company has been incorporated at Bradford, Ill. B. F. Newton, Arthur Wilson, Chas. Austin, Glen Steward, Geo. Shurts and Wm. Coleman are the incorporators.

The new warehouse of the Cauton Co-operative Grain & Supply Company of Canton, Ill., has been completed. The firm will handle feed and machinery. The company also operates elevators at Breeds and Civer.

The Farmers Co-operative Company has completed its new 20,000-bushel concrete elevator at Bentley, Ill. The equipment includes a 10-horsepower Fairbanks-Morse Engine, one leg, dump, manlift, automatic scales and one distributor.

The Reliance Construction Company has completed a new concrete elevator at Flanagan, Ill., for the Farmers Grain Company. The elevator has capacity of 60,000 bushels and is equipped with a Fairbanks-Morse Oil Engine, 3,000-bushel automatic scale, Constant Manlift and transmission machinery.

To handle grain, seed and farm products, the Hillsdale Co-operative Elevator Company has been incorporated at Hillsdale, Ill., capitalized at \$40,000. John Woodburn, H. A. Daily, H. H. Palmer,

Levi H. Roff and Seth A. Wilson are the organizers. The company has purchased the John J. Butzer Elevator and other buildings for the consideration of \$23,000.

The name of the Wallace Grain & Supply Company of Wallace (Freeport p. o.), Ill., has been changed to that of the Wallace Co-operative Grain & Supply Company. The company is now operating on a co-operative basis. H. A. Bonjes is manager.

The Table Grove Co-operative Company has put its new elevator at Table Grove, Ill., into operation. The equipment includes two legs, two complete distributors, a five-bushel automatic weigher and a 10-ton truck scale and dump. Geo. B. Warren is manager.

The Niantic Farmers Elevator Company of Niantic, Ill., has changed its name to that of the Niantic Farmers Co-operative Company. It has also changed its operating policy to that of a co-operative company and increased its capital stock from \$12,000 to \$30,000.

WESTERN

The United Elevators Company has purchased the elevators at Worden and Huntley, Mont.

The Columbia Elevator Company of Ismay, Mont., is now under the management of A. C. Tracy.

E. L. Bloom is succeeded by W. D. Shedron as manager of the Brush Elevator at Brush, Colo.

An elevator is to be erected at Las Vegas, N. M., this spring by D. Hock of Albuquerque, N. M.

A new elevator costing \$50,000 is to be erected at Clovis, N. M., for the Western Trading Company.

The Montana-Dakota Elevator at Scobey, Mont., is under the management of Max Dunn of Froid.

The Farmers Elevator Company at Nohly, Mont., is now under the management of A. F. Eckenbeck.

The Union Flour Mills of Union, Ore., have completed six new tanks with capacity of 10,000 bushels each.

A grain elevator is to be erected at Douglas, Wyo., for the Grain & Storage Company operating at that place.

D. A. Banks succeeds Fred Lewis as superintendent of the Union Grain & Elevator Company of McCammon, Idaho.

The Equity Co-operative Association of Twodot, Mont., is succeeded in business there by the Farmers Elevator Company.

The Randall, Gee & Mitchell Company has purchased the Emporium Elevators located at Galata, Devon and Dunkirk, Mont.

Operations have been started in the elevator of the Hayden Mutual Elevator Company at Hayden, Colo. John Parker is manager.

An office has been opened at Pocatello, Idaho, by the McCaull-Dinsmore Company. The office is under the management of A. E. Dornbach.

A consolidation was recently effected between the Western Lumber & Grain Company and the Montana Elevator Company of Fergus, Mont.

The Lane & Sons Grain Company of Clovis, N. M., has completed a new warehouse. In addition to grain the company handles implements.

The grain business of the Elder Grain Company at Sterling, Colo., has been purchased by the Fred W. Elder Grain Company. C. R. Gilmore is manager.

A four tank 60,000-bushel concrete elevator has been completed at Portland, Ore., for the Columbia Milling Company. The elevator is operated by electricity.

L. P. Turner, Wm. Tonke and Ed. Gooley have incorporated at Mohler, Wash., as the Independent Grain Company of Mohler. The capital stock of the firm is \$32,000.

The Midland Elevator Company of Niobe, Mont., has equipped its elevator with a cleaner and grader. Thos Kehoe is president and F. E. Robertson manager of the firm.

The Cash Grain Company at Red Lodge, Mont., has been purchased by the United Elevators Company. Will erect an elevator at Red Lodge and at Columbus and Roberts.

A warehouse in Los Angeles, Calif., has been purchased by the West Coast Grain Company, in which will be handled bulk and sacked grain. The company has remodeled the establishment.

The interests of M. Russell in the Weiser Grain & Feed Company at Weiser, Idaho, have been purchased by Walter Davidson. New machinery for manufacture of poultry feed is to be installed.

The Corcoran, El Rico, Angiola and Harvester, Calif., warehouses of the Corcoran Mill & Elevator Company of Corcoran, Calif., have been sold to S. C. Dunlap of Los Angeles. He will operate them under the name of the Corcoran Mill Warehouse Company.

The latest addition to Portland's (Ore.) equipment for caring for ocean commerce is the box car unloader installed by the Commission of Public Docks on Pier 5 of the Municipal Terminal No. 4.

The unloading machinery is expected to save time and labor costs by doing away with hard shoveling and will be used to facilitate the handling of grain at the terminal.

A new 65,000-bushel elevator has been completed at Fort Collins, Colo., for the Colorado Mill & Elevator Company. The Burrell Engineering & Construction Company had the contract for the building.

Herbert E. Johnson has resigned his position as vice-president and general manager of the Colorado Milling & Elevator Company of Denver, Colo., and has gone to Florida with his family. He has been associated with J. K. Mullen in the management of this company for many years.

The 20,000-bushel elevator of the Scott-George Grain Company at Holley, Colo., has been completed. The elevator is of frame construction and is equipped with a 10-horsepower Fairbanks Engine, a 10-ton Fairbanks Truck with steel frame, automatic scale, auto truck dump, rope drive and distributor.

Grain elevators are to be erected at Williams, Willows, Yuba City, and Marysville, Calif., for the California Farm Bureau Elevator Corporation. A 75,000-bushel elevator of concrete construction and costing \$40,000, is to be erected at Dixon, Calif., for the same corporation. J. H. Peterson is chairman. The Macdonald Engineering Company has the contract.

MISSOURI, KANSAS AND NEBRASKA

An elevator at Argyle, Mo., has been purchased by the Farmers Union.

The grain business of R. J. Ellis at Syracuse, Mo., has been sold out by him.

The Farmers Elevator Company of Shubert, Neb., has dissolved as a corporation.

Fred Graves of Foss, Okla., has purchased the Bell Elevator at David City, Neb.

The Otterville Farm Bureau has purchased the Farmers Elevator located at Otterville, Mo.

Operations have been started in the new elevator of the Farmers Union at Pawnee City, Neb.

The Reno Grain Company at Kismet, Kan., has been succeeded there by the Moore Grain Company.

The Farmers Elevator Company of Bunker Hill, Kan., is now under the management of E. E. French.

D. Johnson & Son of La Grange, Mo., has been succeeded there by the La Grange Elevator Company.

The grain elevator of the Chicago, Burlington & Quincy at St. Joseph, Mo., which burned, is to be rebuilt.

A new brick and tile building, 75x100 feet, has been erected at Liberal, Kan., for the Vickers Grain Company.

An electric motor and suction fan has been installed for the Farmers Elevator Company of Dighton, Kan.

The Mitchell Grain & Supply Company of Mitchell, Kan., has sold out to J. S. Henney and Chas. O'Neill of Mitchell.

A new sheller is to be installed in the plant of the Nodaway Valley Farmers Elevator Company at Maitland, Mo.

The Farmers Elevator Company of Woodcliff (Fremont p. o.), Neb., is under the management of I. L. Thomas.

The Polo Elevator Company of Polo, Mo., has been incorporated. The capital stock of the organization is \$30,000.

Capitalized at \$15,000, the Deepwater Grain, Produce & Supply Company has been incorporated at Deepwater, Mo.

The Holland-O'Neal Milling Company has completed a 25,000-bushel reinforced concrete elevator at Mt. Vernon, Mo.

The elevator of the United Elevator Company of Topeka, Kan., has been equipped with several Fairbanks Automatic Scales.

Brownfield & Piatt are no longer in the grain elevator business at Pilot Grove, Mo. They have dissolved the partnership.

A concrete grain elevator is to be erected this spring at Osage City, Mo., by the J. M. Hayes Elevator & Milling Company.

The elevator of the Farmers Union at Lawrence, Kan., is to be rebuilt. This will replace the one which burned in December.

A new 60x100 foot implement warehouse has been completed at Chillicothe, Mo., for the Scurby Bros. Grain & Milling Company.

The implement business of the C. M. Alspach Grain Company at Kirwin, Kan., has been purchased by T. V. Love of Goodland.

The Farmers Grain & Produce Exchange has been incorporated at Rosebud, Mo. The company is conducting a grain elevator there.

The new elevator of the Zarah Co-operative Company of Zarah, Kan., has been completed and operations have been started in it. The elevator has a

capacity of 10,000 bushels and has a feed and flour warehouse in connection with it. The company will handle grain, feed, flour and coal.

A 10,000-bushel elevator of concrete construction has been completed for the Associated Mill & Elevator Company of Thayer, Kan.

A new 15,000-bushel hollow tile elevator has been completed at Corning, Kan., for the Farmers Co-operative Business Association.

The Farmers Elevator at Beaver Crossing, Neb., is under the management of Ed. Wahr. J. H. Strother has resigned as manager.

The Lilly & Mabrey Flour, Feed & Grain Company has been incorporated at Cape Girardeau, Mo., by Thos. S. Lilly and H. D. Mabrey.

A new cob burner has been completed at Elsberry, Mo., for the Farmers Co-operative Elevator Company. M. W. Henry is manager.

A new 20,000-bushel elevator has been completed at Clay Center, Kan., for Starkweather & Wilson. The contract has not as yet been let.

A new 15,000-bushel concrete elevator has been completed at McGirk, Mo., for the McGirk Farmers Elevator Company. J. D. Wood is manager.

The Farmers Union at Stapleton, Neb., which was recently organized to handle grain, coal and livestock, is under the management of J. D. Karns.

A new elevator has been completed at Kimball, Neb., by Geo. Talbert and F. J. Vnuk. They will operate as the Talbert & Vnuk Grain Company.

A co-operative grain elevator company has been organized at Argyle, Mo., by the farmers around there. The company will purchase feeds, flour, bran, etc.

The interests of W. H. Perrine & Co., in the elevator at Hardin, Mo., have been purchased by W. H. Trenchard. He is now sole owner of the establishment.

The Abilene Flour Mills have purchased the elevator of the Manchester Grain Company of Abilene, Kan. They will continue operations under the old name.

Ira Dean & Son of Ashland, Neb., are interested in the erection and operation of a grain elevator there. They have conducted a feed and coal business for years.

The Osborn Elevator Association of Osborn, Mo., has let the contract for the erection of a two-story warehouse and elevator to be built on the circular bin plan.

The elevator of the Nye-Schneider-Fowler Grain Company of Bruno, Neb., is to be operated by electricity. The plant was formerly operated by gasoline power.

R. V. Hitschmann, R. I. Meyers and V. J. Dole-schek have incorporated the Beaver Grain & Supply Company of Beaver, Kan. The capital stock of the firm is \$60,000.

V. F. Chandler of Clay Center, Kan., has charge of the elevator of the Farmers Elevator Company of Humboldt, Neb. The elevator has capacity of 35,000 bushels.

The Farmers Elevator Company of O'Fallon, Mo., is now to be conducted on a co-operative basis. The capital stock has been increased to \$40,000. I. Mad-ding is manager.

The Van Winkle Grain & Lumber Company's property has been purchased by the Farmers Grain & Lumber Company of Charleston, Neb. Dan J. Kreger is manager.

The Johnson County Grange Co-operative Association has increased the capacity of its elevator at Holton, Kan. It has also equipped the plant with a 30-horsepower motor.

Articles of incorporation have been filed by the Cameron Co-operative Elevator Company of Cameron, Mo. J. C. McComb is manager. The firm is capitalized at \$30,000.

The 23,000-bushel elevator of the Farmers Union Company is now ready for operation at Seneca, Kan. The plant is equipped with two motors and other modern machinery.

J. M. Swearingen, Herman Dulle and J. J. and E. J. Welch have incorporated as the Centertown Farmers Elevator Company of Centertown, Mo. The capital stock of the firm is \$8,000.

The capital stock of the Farmers Co-operative Elevator Company of Jasper, Mo., has been increased from \$15,000 to \$35,000. F. W. Wescott is president and J. A. Cochran, vice-president.

The North Elevator at Rexford, Kan., is now owned by Robt. Eubanks and D. W. Osborne. The elevator was erected four years ago. Possession was given the new owner on January 24.

The Phillips County Union has let the contract for a 20,000-bushel elevator at Woodruff, Kan., of studded construction, equipped with a 15-horsepower oil engine, truck dump, sheller and cleaner.

The work on the new 30,000-bushel concrete elevator of the Emma Co-operative Elevator Company at Emma, Mo., will be completed early in the spring. The building is practically erected, the bin roof slab is completed and only the headhouse remains

to be built. The dump house and office building, also of reinforced concrete construction, have been completed.

Frank Antrim's interest in the Ravenscroft-Antrim Grain Company of Kingman, Kan., has been purchased by H. C. Parks. Hereafter the plant will be operated as the Ravenscroft Grain Company.

A new 16,000-bushel elevator has been completed at Burlingame, Kan., for the Farmers Elevator & Shipping Company. The plant is equipped with a gasoline engine, cleaner, sheller, Fairbanks 10-truck Scale and a Fairbanks Auto Scale.

The Farmers Co-operative Grain Company of Peru, Neb. has dissolved. A new firm is being organized, however, by almost the same personnel as the old company. This organization has purchased and will operate the Fisher Elevator at Peru.

The elevator at South Auburn (Auburn p. o.), Neb., operated by Chris Sorensen under the name of Sorensen & Coryell, has been purchased by T. J. Geddes from August Behling and J. H. Geddes. Mr. Sorensen will continue to operate the house.

The Central Kansas Milling Company of Lyons, Kan. has built a new 74,000-bushel elevator at that place. The equipment includes an auto truck dump, Invincible Cleaner, power shovel, 2,000-bushel hopper scale, two steel legs and car spout. The Burrell Engineering & Construction Company had the contract.

The Speed Farmers Elevator Company of Bunce-ton, Mo., has reincorporated and capitalized at \$10,000. The company will conduct a grain elevator, produce exchange and co-operative livestock and shipping business. L. V. Wendleton is president; Peter Hein, vice-president; C. D. Shirley, secretary-treasurer and V. A. Worts, manager.

MINNESOTA AND WISCONSIN

The Farmers Elevator at Faribault, Minn., is to be conducted on a co-operative basis hereafter.

The Farmers Elevator Company has purchased the Quinn Elevator located at Litchfield, Minn.

The Farmers Elevator, Belleplaine, Minn., is to be conducted under the management of Martin Hagen.

Allen & Son's elevator at Predmore (Eyota p. o.), Minn., has been purchased by the Northern Field Seed Company.

J. D. Cox has purchased the elevator and warehouse of the American Co-operative Association located at Dundas, Wis.

The Haven Equity Co-operative Association of Haven, Wis., has equipped its new warehouse with a Bernert Grain Blower.

G. B. Nord is succeeded as manager of the Farmers Mill & Elevator Company located at Warren, Minn., by Arvid Boman.

On February 1 the Monarch Elevator Company's elevator at Dalton, Minn., was closed down. It will remain so until business picks up.

The Farmers Mercantile & Elevator Company of Kenyon, Minn., has amended its charter and increased its capital stock to \$150,000.

The capital stock of the Consolidated Milling & Elevator Company of Chippewa Falls, Wis., has been increased from \$50,000 to \$80,000.

The charter of the Rocky Mountain Elevator Company, Minneapolis, Minn., has been amended and capital stock increased from \$300,000 to \$600,000.

The elevator at Mahanomen, Minn., owned by Thompson, Qually & Sulke has been sold by them to the Kellogg Commission Company of Minneapolis, Minn.

M. P. Eidberg has purchased the elevator of Carl N. Nelson at Starbuck, Minn., for the consideration of \$7,000. Possession will be given the new owner in either July or August.

The Rippe Mill & Elevator Company of Welcome, Minn., has completed a new 20,000-bushel elevator of cribbed construction. The motive power is furnished by gasoline engines.

An elevator costing \$27,000 is to be erected at Spring Valley, Wis., for the Farmers Elevator & Implement Company. Mr. Kerg is manager and Mr. Kuchl, assistant manager.

Joseph West, Leo Gensman and John C. West have incorporated the Merrill Elevator Company of Merrill, Wis., to conduct a general milling business, grain elevator, etc. Its capital stock is \$25,000.

Tom Dolemeter, Herman Maass and John Groat are the incorporators of the Seymour Equity Exchange of Seymour, Wis., which will handle grain, feed, flour, etc., there. Capital stock of the firm is \$20,000.

Capitalized at \$25,000, the Prentice Co-operative Supply Company has been incorporated at Prentice, Wis. The company will buy and sell farm products. John Sundquist, Albert Roth and E. I. Anderson are interested.

The Plato Farmers Co-operative Elevator Company has been incorporated at Plato, Minn., and has purchased the elevator there which Geo. Hoelz recently purchased from the Miller Elevator Com-

pany. Charles Huepenbecker is president; Wm. Martin, secretary and treasurer; D. Hoernemann, W. F. Graupman and Wm. Studeman, directors of the elevator concern.

The Northfield Farmers Mercantile & Elevator Company of Northfield, Minn., has voted to sell its plant and equipment to the new co-operative company being organized at Northfield by the farmers of that vicinity.

To conduct a general grain and feed business the Rio Produce Company has been incorporated at Rio, Wis., capitalized at \$10,000. The incorporators are: C. E. Higbee, Fred E. Jacobsen, Hans Larson and Nils G. Peterson.

J. C. Parel, Fred Riplinger and B. F. Riplinger are named as incorporators of J. C. Parel & Co., of Riplinger, Wis. The company will conduct a grain, feed and flour business as it did before it was incorporated. The capital stock of the corporation is \$10,000.

The Oneida Grain Company of Rhinelander, Wis., has been purchased by the Consumers Hay Company. E. H. Rogers has severed his connection with the Oneida firm with which he was connected. The companies will be operated independent of each other.

Otto Kroll's elevator, flour and feed store and general business at Ripon, Wis., has been purchased by the recently incorporated Badger Farmers Co-operative Company. Peter Hammen is president; Geo. Koehler, vice-president; Arthur Hintz, secretary-treasurer; and Frank Mielke, manager.

The Co-operative Supply Company, recently incorporated at Cedarburg, Wis., has purchased the J. H. Dunne Elevator there. It will make improvements and additions and expand the business in general. The company will handle grain, flour and feed. Chas. Pollow, Edwin Pipkorn and M. Lennarts are interested.

A company recently organized at Minneapolis, Minn., by Julius Barnes and others has purchased the Calumet Elevator. The elevator formerly belonged to Nye, Jenks & Co. Julius Barnes' company has also purchased the Itasca Elevator at Duluth from the Nye, Schneider, Fowler Company. The Nye, Jenks company, which has been in business for 30 years, is closing out.

The Farmers Grain Company of Taylor, Wis., has made several improvements on its elevator. The improvements include the installation of the following machinery: Automatic scale of 1,000 bushels' capacity; a Strong-Scott Manlift; new leg, driven by a five-horsepower motor; cleaner driven by a three-horsepower motor; a 24-inch Monarch Attrition Mill, driven by two 20-horsepower motors; and a 10-horsepower motor for corn machines and the elevators.

THE DAKOTAS

The Farmers Grain & Fuel Company at Waubay, S. D., is succeeded there by Englehart & Williams.

A new grain cleaner has been installed in the elevator of the Andrews Grain Company of Milnor, N. D.

The Osborne-McMillan Elevator at Voltaire, N. D., is to be conducted under the management of C. S. Opland.

The Great Western Grain Company of Gardner (Watertown p. o.), S. D., is to be managed by C. O. Anderson.

The Freeman Grain Company has purchased the elevator of the Healy-Owen-Hartsell Company at Reeder, N. D.

The Lantry Equity Exchange succeeds the Farmers Elevator Company at Lantry, S. D. J. H. Francis is manager.

Motors, scale and dump have been installed in the elevator of the Farmers Co-operative Elevator Company of Deslacs, N. D.

The Farmers Elevator Company of Gregory, S. D., has appointed Chas. Deegan of Lucas as manager. H. V. McFayden has resigned.

The Farmers Co-operative Elevator Company of Henkin (Madison p. o.), S. D., is succeeded in business there by the Henkin Elevator Company.

The Casselton Elevator Company of Casselton, N. D., has completed a new 30,000-bushel cribbed elevator. The elevator is operated by electricity.

Farmers around Mannheim, N. D., have organized an elevator company and have plans under construction for purchasing and operating a small grain elevator there.

The St. Anthony & Dakota Elevator Company has completed its new 25,000-bushel elevator at Weaver, N. D. It is of cribbed construction, covered with wood siding and a cedar shingle roof.

Helmer Brundell succeeds A. W. Youngquist as secretary of the Farmers Equity Elevator Company of Powers Lake, N. D. Mr. Youngquist, who resigned his position, had been with the company for 10 years.

The new elevator of the Farmers Elevator Company at Kingsburg, S. D., with capacity of 20,000 bushels, has been completed. This replaces the one

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which burned last spring. The elevator is operated by a gas engine.

A new elevator is to be erected at Parker, S. D., this spring by the Shanard Bros. The elevator will have a capacity of 30,000 bushels.

The Miller Elevator Company of Clairs City, S. D., has completed the installation of a five-horsepower electric motor in elevator. Electric lights have also been installed throughout the plant.

SOUTHERN AND SOUTHWESTERN

The Remke Grain & Seed Company was recently organized to operate at Lawrenceburg, Tenn.

The Vickers Grain & Seed Company of Asheville, N. C., is erecting a new building, 75x100 feet.

The Hicks Elevator at Canyon, Texas, is now owned by the L. E. Gearley Grain Company.

The grain and feed plant of the Kentucky Feed & Grain Company at Louisville, Ky., has been completed.

A grain elevator is to be erected at Red Rock, Okla., for the Farmers Union Co-operative Exchange.

R. B. Jones entered the grain business at Pine Bluff, Ark., on February 1 under the name of R. B. Jones & Co.

John Duvall is succeeded as manager of the Sappington Elevator Company of Laverne, Okla., by Roy Sappington.

A grain and hay business is to be conducted at Brady, Texas, by W. K. Gay. He has leased a building there in which he will operate.

The Cobb Grain Company of Ashdown, Ark., owned by C. S. and Grover Cobb, has been purchased by W. F. Nicol and H. C. Routon.

The interest of F. Laughlin in the Farmers Grain Company of Calumet, Okla., has been purchased by L. P. Hickman. He took charge January 1.

A branch office has been established at Gadsden, Ala., for the W. M. Crosby Flour & Grain Company of Birmingham, Ala. G. L. Moore will have charge of it.

The contract has been let by Marshall Mott for the erection of a grain storage plant at Memphis, Tenn. The elevator will have capacity of 15,000 bushels.

The Farmers Elevator at Lockney, Texas, has been completed. Additional storage capacity is being added giving the elevator capacity of 100,000 bushels.

The Childress Grain Company has been incorporated at Temple, Texas, capitalized at \$60,000. A. E. Childress, Geo. Houghton and N. C. Erskine are interested.

W. H. Titus' elevator, formerly conducted as the Orient Grain & Coal Company, at Seutinel, Okla., has been purchased by the Cameron Grain Company of Wichita, Kan.

The Yukon Mill & Grain Company has filed incorporation papers at Yukon, Okla., capitalized at \$1,200,000. J. F. and F. L. Kroutil and A. F. Dorby are interested.

The 6,000-bushel elevator at Archer City, Texas, formerly operated by C. A. Calvert & Son, has been purchased by the Graham Mill & Elevator Company of Graham, Texas.

The elevator building at Goodwell, Okla., has been purchased by the Goodwell Equity Exchange from the Liberal Elevator Company. The elevator has capacity of 12,000 bushels.

The Farmers Co-operative Elevator Company of Granite, Okla., has completed its new wooden and iron clad 25,000-bushel elevator. The plant was put into operation February 1.

The Guthrie Grain & Elevator Company has purchased the elevator of the Shaw Grain Company, at Bridgeport, Okla. The company will move the elevator to a site on the railroad.

H. J. Bradfish, F. E. Allen and Thelma Bradfish have filed articles of incorporation as the Cisco Grain & Elevator Company of Cisco, Texas. The incorporation is capitalized at \$15,000.

Oliver Cranston, R. T. Giraud and M. L. Forbes, incorporated as the Oliver Cranston Grain Company at Houston, Texas, have increased the capital stock of the company from \$35,000 to \$75,000.

Capitalized at \$100,000, Farris & Co., have been incorporated at Jacksonville, Fla., to conduct a grain and livestock business. H. E. Farris is president; R. E. Farris, vice-president, and Ralph A. Farris, secretary.

Incorporation papers have been filed by the Transit Grain & Commission Company of Fort Worth, Texas, capitalized at \$50,000. Lee Potishmam, Young DeWitte and Frank King are interested. The company will erect several elevators for shipping purposes. L. Potishmam is president and Young DeWitte, vice-president.

The Durant Grain & Elevator Company and the Durant Milling Company of Durant, Okla., have consolidated as the Durant Milling Company. The new firm has combined storage capacity of 500,000

bushels bulk and 200,000 bushels sacked grain; its total milling capacity is 600 barrels cornmeal, 5,000 sacks corn chops and 500 sacks mixed feed.

R. D. Miller's interest in the Miller-Jackson Grain Company of Tampa, Fla., has been purchased by F. D. Jackson and the interest of Mr. Jackson in the Miller-Jackson Supply Company has been transferred to Mr. Miller.

Work has been completed on the new 23,000-bushel elevator, feed plant and wooden warehouse of the Adkins Hay & Feed Company of Muskogee, Okla. The Burrell Engineering & Construction Company had the contract.

The grain, hay, feed, cottonseed products and

flour business which S. C. Johnston & Co. formerly conducted at Birmingham, Ala., is now conducted by the Johnston-Holley Company. The change became effective January 1.

A grain elevator, headhouse, and cement mill building is to be erected at San Antonio, Texas, for the Liberty Mills of which Gus Geisecke is president and manager. The contract has been let to the A. E. Baxter Engineering Company.

The Burrell Engineering & Construction Company has completed for the Harvest Queen Mills Company of Plainview, Texas, a new 225,000-bushel elevator of concrete construction. The elevator is equipped with a concrete drier.

OBITUARY

ADAMS.—Claiborne Adams died at Chicago, Ill., suddenly. He was for a number of years manager of the Globe Grain & Milling Company of El Paso, Texas, and had for many years been prominent in the grain and flour business.

BARSTOW.—Adrian Barstow, vice-president of the Barstow Grain Company, was murdered at his home in Lincoln, Neb., on January 22. His murderer has not been apprehended.

BORLAND.—After a brief illness from pneumonia, William Borland died on January 26 at Toronto, Ont. He was a well known flour and feed merchant of Caledon East, Ont.

COFFIN.—At the age of 62 years, Fred H. Coffin died suddenly at his home in Lebanon, Ore. For more than 40 years Mr. Coffin had been engaged in the grain brokerage business in the state of Oregon.

DEVLIN.—The sympathies of the trade are extended to J. H. Devlin, of Albert Miller & Co., Chicago, who recently lost his son, Julien. When the United States entered the war, Julien Devlin tried to enlist in the United States Army, but was re-

Ky. He was a retired feed merchant of that city. He is survived by his widow.

KING.—Frank I. King of C. A. King & Co., of Toledo, Ohio, died at his home there on January 29. Mr. King was known to grain men all over the country as "Our Boy Solomon" and was respected and beloved by his acquaintances. An extended obituary notice concerning his life and activities is given in another portion of this issue.

KING.—On January 4, D. J. King passed away. He had been engaged in the feed business at Uniontown, Pa., with his brother, John A., for 30 years.

LEGG.—James C. Legg, one time president of the Baltimore Chamber of Commerce and prominent in the grain and flour trade of Baltimore, Md., died



THE LATE JULIEN DEVLIN

jected because of poor health. He then went to Canada and was accepted by its army. Since the Armistice he has been traveling seeking to regain his lost health, but failed, and passed away, another victim of the great war.

DODGE.—O. V. Dodge was murdered at his home in Kansas City, Mo., by a burglar. Mr. Dodge was a member of the Kansas City Board of Trade from 1907 to 1911 and during the year 1909-10 was a director. While in the grain business he had been associated with the Moses & Dodge Grain Company. Three children survive him.

FOSGATE.—After a long illness, William J. Fosgate died on January 13 at San Jose, Calif. He was connected with the seed trade as Fosgate & Lion.

FROST.—Jos. Frost, superintendent of Early & Daniel Company, died at his home in Norwood, a suburb of Cincinnati, Ohio, after an illness of one year's duration.

GILFILLAN.—On January 20, James S. Gilfillan died at Toronto, Ont. Mr. Gilfillan was a retired grain man.

GRAHAM.—Following an operation, Fred A. Graham died at a Spokane, Wash., hospital on January 9. Mr. Graham had been associated with the Washington Grain & Milling Company and the Central Grain Company; but at the time of his death was in the brokerage business for himself.

HOOPLE.—Nelson Hoople died on January 29 at Duluth, Minn. He was a pioneer grain man in the state of Minnesota and had been connected with grain and commission houses in that state.

JONES.—John A. Jones died at his home in Nashville, Tenn., on January 17. He was president and general manager of the J. A. & O. L. Jones Mill & Elevator Company. His widow and four children are left.

KETTLER.—John B. Kettler died at Newport,



THE LATE JAMES C. LEGG

at his home there on February 1 after a brief illness from pneumonia. Mr. Legg was associated with John C. Legg & Co., grain and flour merchants.

MCDONALD.—Donald A. McDonald died from heart disease at his home in Minneapolis, Minn. He was president of the McDonald & Wyman Company, grain merchants, and had been an active member of the Chamber of Commerce since 1893. His widow and one son survive him.

MERENESS.—Pneumonia caused the death recently of W. E. Mereness of the Brooks Elevator Company of Minneapolis, Minn. He entered the grain business with the Northern Grain Company as elevator agent; later was in grain business at Milwaukee as Potter & Mereness. In 1913 he became associated with the C. E. Gee Grain Company. His widow and three children survive him.

MERRITT.—Wellington C. Merritt died on January 4 at his home in Philadelphia, Pa., at the age of 46 years. He was connected with the C. W. Bosler Feed Company of Ogontz, Pa.

NICHOLS.—Joseph B. Nichols was found dead beneath his overturned automobile not long ago. Mr. Nichols was connected with the Nichols-Friesen Grain Company of Wichita, Kan.

NISSSEN.—A. H. Nissen died recently at his home in Broomfield, Colo., where he had been engaged in the grain business.

PIERCE.—Chas. B. Pierce, a retired grain merchant, died in Boston, Mass., during the latter part of January. Mr. Pierce for many years was a member of the Chicago Board of Trade and was vice-

president of the Bartlett Frazier Co. at the time of his retirement two years ago. Mr. Pierce was 65 years old at the time of his death. His widow and two daughters survive him.

PETERSON.—On January 11, after a brief illness, F. S. Peterson died at his home in Elizabeth, N. J. He was well known in the seed trade and had been associated with Alex. Forbes & Co., since 1913.

PEASE.—C. M. Pease died at Kansas City, Mo., recently. He was the oldest grain inspector in point of service employed by the Kansas State Grain Inspection Department.

PHELPS.—F. W. Phelps died recently at Los Angeles, Calif. He was a pioneer in the grain business in the state of Minnesota.

REDFIELD.—A. P. Redfield died on February 1, aged 80 years, at Indianapolis, Ind. Mr. Redfield was a fire insurance adjuster and had specialized in elevators and flour mills and was well known to grain and mill men throughout the state.

ROGERS.—On January 27 Henry W. Rogers died at his home in Chicago, Ill., aged 89 years. Mr. Rogers was one of the pioneers in the grain trade in Chicago and had been a member of the Chicago Board of Trade since its early days. Further details are given elsewhere concerning Mr. Rogers' connections and activities in the grain trade.

RUMMEL.—On January 12, G. H. Rummel died at Delavan, Ill. He was president and organizer of the Farmers Elevator Company there.

SHEARHOD.—Joseph K. Shearhod died at a Wichita, Kan., hospital after a short illness. Mr. Shearhod was manager of the Myorg Grain Company.

SMITH.—Guy Smith committed suicide by hang-

ing himself from a rafter in the elevator at Conde, S. D., of which he was manager. No reason is given for his act.

STEINBEL.—On February 2, Grover Steinbel died at a Valparaiso, Ind., hospital where he had been brought for treatment. Mr. Steinbel was a grain buyer and manager of an elevator at Wheatfield, Ind.

SWARTLEY.—M. R. Swartley on January 26 died at his home in North Wales, Pa. He was in the grain business at North Wales, and had been a member of the Philadelphia Commercial Exchange for 38 years. He operated in the name of the Swartley Bros.

THOMPSON.—A. D. Thompson died on February 7 at Palm Beach, Fla. He was a grain merchant, bank and railroad director and capitalist of Duluth, Minn. He had been a member of the Duluth Board of Trade since 1883.

THOMPSON.—John A. Thompson died at Indianapolis, Ind., on January 5. He was a partner in the Cutsinger & Thompson Elevator at Shelbyville, Ind. His widow, son and daughter survive him.

WALTON.—Samuel Walton died recently at his home in Bellevue, Pa. He was a well known hay man and had been president of the National Hay Association; he had also held various offices in the Pittsburgh Hay & Grain Exchange. Further details are given elsewhere.

WHITMYER.—David Whitmyer died not long ago aged 84 years. Mr. Whitmyer had for 47 years been in the grain business at Villisca, Iowa.

WILSON.—Henry C. Wilson died at his home in Chicago. He was formerly secretary of the Indianapolis Board of Trade. His widow, two sons and two daughters survive him.

RECEIPTS AND SHIPMENTS

Following are the receipts and shipments of grain, etc., at the leading terminal markets in the United States for January:

CHICAGO.—Reported by John R. Mauff, secretary of the Board of Trade:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	1,193,000	1,814,000	1,415,000	3,590,000
Corn, bus....	21,606,000	8,124,000	7,056,000	3,903,000
Oats, bus....	5,806,000	7,297,000	4,200,000	5,776,000
Barley, bus..	952,000	1,000,000	670,000	427,000
Rye, bus....	424,000	754,000	571,000	803,000
Timothy Seed, lbs.	1,706,000	2,383,000	2,600,000	2,913,000
Clover Seed, lbs.	2,288,000	2,154,000	1,383,000	1,695,000
Other Grass Seed, lbs..	1,138,000	3,196,000	1,881,000	2,072,000
Flax Seed, bus.	46,000	200,000	2,000	.....
Broom Corn, lbs.	1,305,000	2,174,000	1,142,000	1,527,000
Hay, tons....	17,354	21,562	2,266	2,233
Flour, bbls..	691,000	1,144,000	479,000	802,000

BALTIMORE.—Reported by Jas. B. Hessong, secretary of the Chamber of Commerce:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	1,273,563	500,461	2,441,600	926,402
Corn, bus....	2,307,017	542,090	1,600,506	85,714
Oats, bus....	215,848	274,678	62,354	50,000
Barley, bus..	49,806	12,679	363,075	.....
Rye, bus....	1,347,975	1,523,885	1,432,747	275,861
Hay, tons....	1,560	2,341	.....	.....
Flour, bbls..	75,861	141,267	84,954	267,767

DULUTH.—Reported by Chas. F. MacDonald, secretary of the Board of Trade:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	2,094,681	374,962	1,607,042	607,064
Corn, bus....	49,359	.....	690	.....
Oats, bus....	638,457	30,454	4,938	56,111
Barley, bus..	5,997	36,519	25,063	3,096
Rye, bus....	336,474	1,544,214	469,015	26,544
Flax Seed, bus.	170,840	88,417	57,431	62,615
Flour, bbls.: Production	44,640	97,805	35,865	86,095

FORT WILLIAM, ONT.—Reported by E. A. Ursell, statistician of the Board of Grain Commissioners:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	7,770,109	5,536,588	7,154,950	5,166,290
Corn, bus....	1,127	.....	.....	.....
Oats, bus....	3,148,251	2,338,219	886,532	904,114
Barley, bus..	702,603	586,701	509,645	358,686
Rye, bus....	176,579	54,702	135,005	.....
Flax Seed, bus.	364,160	102,763	19,783	62,997
Mixed Grain, lbs.	2,054,620	1,651,464	444,730	657,410

INDIANAPOLIS.—Reported by Wm. H. Howard, secretary of the Board of Trade:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	159,900	254,800	68,900	113,100
Corn, bus....	1,937,600	1,870,400	1,586,200	1,443,400
Oats, bus....	1,052,000	1,214,000	832,000	1,154,000
Rye, bus....	19,600	23,800	.....	21,000
Hay, ears....	73	.....	131	.....

KANSAS CITY.—Reported by E. D. Bigelow, secretary of the Board of Trade:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	10,289,700	6,737,850	6,767,800	4,907,250
Corn, bus....	1,945,000	1,275,000	618,750	563,750
Oats, bus....	707,200	676,600	516,000	649,500
Barley, bus..	205,500	339,000	186,600	137,800
Rye, bus....	70,400	77,000	64,900	105,600
Hay, tons....	37,656	84,264	20,388	41,304
Flour, bbls..	44,525	80,600	271,050	343,200

MILWAUKEE.—Reported by H. A. Plumb, secretary of the Chamber of Commerce:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	247,050	399,320	116,365	612,970
Corn, bus....	3,174,910	1,327,460	1,915,695	672,910
Oats, bus....	1,015,610	2,024,360	816,625	1,040,070
Barley, bus..	991,890	847,800	235,630	278,150
Rye, bus....	403,910	546,750	307,140	388,160
Timothy Seed, lbs.	125,130	32,640	151,669	281,609
Clover Seed, lbs.	260,412	997,161	435,160	648,651
Flax Seed, lbs.	41,350	123,300	530	.....
Feed, tons....	1,350	4,470	17,261	16,234
Hay, tons....	2,069	1,766	108	386
Flour, bbls..	100,900	71,115	110,200	92,850

MINNEAPOLIS.—Reported by G. W. Maschke, statistician of the Chamber of Commerce:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	9,057,990	10,101,180	4,280,700	3,773,540
Corn, bus....	1,907,340	1,077,340	1,490,220	971,550
Oats, bus....	2,027,380	1,235,320	1,492,840	1,929,890
Barley, bus..	1,250,180	896,140	1,431,080	923,800
Rye, bus....	556,720	852,860	606,240	1,908,120
Flax Seed, bus.	277,210	340,410	22,380	19,250
Hay, tons....	2,993	2,420	266	894
Flour, bbls..	95,274	90,482	1,274,612	1,886,379

NEW ORLEANS.—Reported by Geo. S. Colby, chief inspector and weighmaster of the Board of Trade, Ltd.:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	4,852,988	1,639,629
Corn, bus....	689,814	40,570
Oats, bus....	32,170	34,750
Barley, bus..	46,666	140,000
Rye, bus....	365,142	.....

PHILADELPHIA.—Reported by S. S. Daniels, statistician of the Commercial Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	1,343,142	628,096	1,668,010	931,139
Corn, bus....	1,154,397	391,122	535,195	72,176
Oats, bus....	259,043	302,265	.....	.....
Barley, bus..	.....	43,718	.....	92,436
Rye, bus....	303,090	77,017	303,451	76,471
Flour, bbls..	218,375	192,878	49,741	24,563

PORTLAND, ME.—Reported by Geo. F. Feecey, traffic manager of the Chamber of Commerce (all export grain):

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus..	2,927,194	2,676,961	2,931,051	1,969,124
Corn, bus....	.....	310,034	.....	256,920
Oats, bus....	195,706	95,658	141,122	81,100
Barley, bus..	412,787	212,090	311,865	434,150
Rye, bus....	562,086	92,195	537,466	211,170
Buckwheat, lbs.	2,892	.....	5,566	.....

FIRES—CASUALTIES

Canton, Mo.—Fire destroyed the Farmers Elevator here recently.

Humboldt, Iowa.—Henry Mundhenk's elevator was destroyed by fire with a loss of \$25,000.

Meridian, Miss.—Fire destroyed, with a loss of \$75,000, the feed plant of A. H. George & Co.

Chickamauga, Ga.—The feed store here owned by Frank Camp was completely destroyed by fire.

Berg, N. D.—The Berg Elevator together with 27,000 bushels wheat was burned not long ago.

Carnegie, Okla.—Fire on December 29 destroyed the elevator of the J. R. Thomas Grain Company.

Southam, N. D.—Fire, starting from an overheated stove, destroyed the elevator located here.

Watonga, Okla.—The Wheeler Elevator here was damaged by fire slightly. No shutdown was necessitated.

Richville, Minn.—Fire of unknown origin destroyed the elevator during the early part of January.

Mexico, Ind.—Fire destroyed the grain elevator of the Mexico Co-operative Elevator & Livestock Company recently.

Paterson, N. J.—The feed warehouse of Chas. O. Holmberg was damaged by fire recently. Loss amounted to \$2,500.

Oklahoma City, Okla.—The building owned by W. T. Hales and occupied by the Cowan Feed Store was burned recently.

Philadelphia, Pa.—H. B. Cassel & Son's grain and feed plant was damaged seriously by fire. Loss was \$60,000, covered by insurance.

Park Rapids, Minn.—Fire damaged slightly the grain elevator owned by the Farmers Produce Exchange. Loss amounted to \$100.

Walnut Cove, N. C.—Fire destroyed the feed house of J. R. Lackey here. Other buildings were also destroyed, making a total loss of \$75,000.

Wathena, Kan.—The Farmers Alfalfa Milling Company lost its mill by fire. The loss incurred amounted to \$36,000; insurance, \$18,500.

Charleston, W. Va.—Fire destroyed the plant of the West Charleston Feed Company with a loss of \$12,000. This is partly covered by insurance.

Greenwood, S. C.—The store room of the Paris Seed Company was completely wrecked by fire of unknown origin. The damage amounted to \$6,000.

White Lake, S. D.—On January 12 fire, believed to have been of incendiary origin, damaged the Farmers Co-operative Elevator with a loss to owners of \$20,000. The elevator had capacity of 10,000 bushels; it contained about 3,500 bushels when the fire occurred. The building was valued at \$12,000.

Milwaukee, Wis.—Elevator "A" of the Chicago, Milwaukee & St. Paul Railway Company was destroyed by fire on January 25. The elevator was operated by the Donahue-Stratton Company. Near-

by buildings were also damaged; the entire loss amounted to \$500,000. The cause of the fire is not known.

Elgin, Ohio.—The elevator of the Elgin Grain Company collapsed dumping thousands of bushels of grain on the railroad tracks running alongside the elevator.

Prattville, Mich.—Fire destroyed the elevator of the Co-operative Association, the C. N. Depot and a store with a total loss of \$25,000. The fire occurred on January 17.

St. Joseph, Mo.—Fire destroyed the main structure of the Burlington Elevator, with a loss to owner of \$50,000. No grain was in storage in the elevator which was burned.

Huff, N. D.—The Farmers Elevator on February 2 was completely destroyed by fire, the origin of which is unknown. The loss, which includes the grain, is estimated at \$24,000.

New England, N. D.—On January 6 fire destroyed the elevator of the Regent Grain Company with a loss of \$40,000. There were about 20,000 bushels of grain in the elevator at the time of the fire.

Greenville, S. C.—The plant of the West End Supply Company was damaged by fire which is believed to have originated from sparks from a passing locomotive. P. C. Parkins is the owner.

Crowley, La.—Fire destroyed the Planters Warehouse on January 13 together with 25,000 bags of rice. Loss was \$250,000; partially covered by insurance. The origin of the fire is not known.

Maidstone, Ont.—On January 13 the elevator and mill of Vincent McCloskey and Geo. Grondin burned, together with 1,500 bushels grain and a ton and a half of flour. The elevator was insured, the contents were not.

Hysham, Mont.—The Montana Grain Growers Association lost its elevator on January 9 by fire. Loss amounted to \$10,000. The building was completely insured. Several thousand bushels of grain were also destroyed.

Montpelier, Ind.—Fire destroyed on January 24 the J. L. Walker Elevator. Loss amounted to \$45,000; partly covered by insurance. In the fire 25,000 bushels oats, a quantity of wheat, corn and other grain were consumed. Defective electric wiring was the cause.

Yakima, Wash.—Fire destroyed the buildings and stock of the Morgan-McCraid Seed Company here with a loss of \$25,000. The fire started when a workman broke an electric light bulb while repairing a leaky gasoline pipe in one of the company's automobiles.

Pilot Rock, Ore.—Fire destroyed the warehouse of the Pilot Rock Elevator Company containing over 100,000 bushels grain, several carloads of salt, mill feed and merchandise. The loss was \$140,000. The warehouse and contents were owned by an organization composed of farmers in that vicinity.

NEW YORK CITY—Reported by H. Heinzer, statistician of the Produce Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus...	3,282,000	.....	3,151,000	.....
Corn, bus...	939,000	.....	376,000	.....
Oats, bus...	538,000	.....	284,000	.....
Barley, bus...	258,400	.....	264,000	.....
Rye, bus...	1,074,800	.....	1,514,000	.....
Timothy Seed,				
Clover Seed,				
Other Grass				
Seed, bags,	1,550	.....	2,354	.....
Flax Seed, bus.	1,600	.....	.....	.....
Hay, tons...	8,666	.....	.....	.....
Flour, bbls...	673,902	.....	430,000	.....

TOLEDO—Reported by A. Gassaway, secretary of the Produce Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus...	173,700	210,000	127,720	238,055
Corn, bus...	425,000	176,300	160,248	87,050
Oats, bus...	325,950	241,850	227,575	87,280
Barley, bus...	4,800	2,400	.....	1,375
Rye, bus...	46,800	112,200	32,802	103,520
Timothy Seed,				
bags	2,139	5,378	2,372	4,463
Clover Seed,				
bags	6,677	4,818	.....	5,717
Alsike Seed,				
bags	1,016	2,948	1,633	1,652

ST. LOUIS—Reported by Eugene Smith, secretary of the Merchants Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus...	4,511,423	1,619,400	3,072,400	1,276,800
Corn, bus...	3,975,400	3,350,750	2,258,660	1,740,860
Oats, bus...	3,302,000	3,826,000	1,928,680	2,826,330
Barley, bus...	57,950	43,200	25,370	24,760
Rye, bus...	19,800	26,600	.....	26,670
Hay, tons...	18,170	28,365	7,210	17,675
Flour, bbls...	286,580	526,970	332,630	585,390

SAN FRANCISCO—Reported by W. B. Downes, statistician of the Chamber of Commerce:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, tons...	4,735	2,550	.....	.....
Corn, tons...	654	1,019	.....	.....
Oats, tons...	906	2,229	.....	.....
Barley, tons...	39,417	7,670	.....	.....
Bran, tons...	155	130	.....	.....
Beans, sacks...	68,766	189,632	.....	.....
Hay, tons...	5,748	7,486	.....	.....
Flour, 1/4 bbls...	424,959	.....	.....	.....

OMAHA—Reported by F. P. Manchester, secretary of the Grain Exchange:

	Receipts		Shipments	
	1921	1920	1921	1920
Wheat, bus...	2,331,600	1,092,000	1,798,800	1,585,200
Corn, bus...	3,154,200	2,552,200	1,813,000	1,978,600
Oats, bus...	1,008,000	1,146,000	944,000	1,412,000
Barley, bus...	138,600	79,200	129,600	95,400
Rye, bus...	119,900	259,600	126,500	256,300

HAY, STRAW AND FEED

Frank Utterback has purchased the Oral Gregory Feed Mill at Washington, Ind.

W. E. Gorsuch has purchased the feed business of A. C. Cook at Waverly, Kan.

A feed crusher has been installed in the mill of Murrey & Burrs of Franklin, Tenn.

The Partee Feed Company has been purchased by W. T. Rice & Son of Ripley, Tenn.

Butler & Co., have succeeded Butler & Clark in the feed and flour business at Mobile, Ala.

An additional warehouse is to be built at Sedgwick, Kan., for the Sedgwick Alfalfa Mills.

A feed and flour business has been opened at Sarcosie, Mo., by Will Lewis and Fred Robb.

The Great Western Chemical Alfalfa Milling Company of Shelton, Neb., has suspended business.

The Elgin Flour & Feed Company of Elgin, Ill., has increased its capital stock from \$5,000 to \$30,000.

A feed mill is to be installed at Snohomish, Wash., for the Snohomish County Fruit Growers Association.

A wholesale feed and flour store has been opened in the Leavitt Building, Houston, Mo., by McCaskill & Son.

F. C. McAfee's interests in the feed business at Paris, Mo., has been purchased by his partner, W. A. Patrick.

Frank Goodman's feed and flour business at Barneveld, N. Y., has been purchased by McIntosh & Jepson.

The feed mill formerly operated by Aug. P. Radke at Hamburg, Minn., has been purchased by Wm. Luehring.

Geo. S. Record is no longer in the feed business at Waterville, N. Y. He is spending the winter at Deland, Fla.

The Kansas City Flour & Feed Company of De Queen, Ark., has been purchased by W. L. House and S. E. L. Smith.

Feed is to be handled by John Brown of Corinth, N. Y. He is remodeling his place of business to accommodate this.

The Madison County Co-operative Association is to operate the feed mill of the Barnett-Conklin Company of Earlville, N. Y.

A feed mill has been installed by the Moore Bros. of Rosston (Lebanon p. o.), Ind. They will conduct a custom grinding mill.

Frank Whitehear is at the head of a new feed company which recently started in business at Mount Vernon, Wash. The store is located in the building formerly occupied by the City Grain & Feed Store.

August A. Fite, W. M. Fleetwood and W. M. Eakes have incorporated at Tulsa, Okla., as the August A. Fite Company. The company will deal

in feed and food products, as jobbers, manufacturers and exporters. The company is capitalized at \$15,000.

An alfalfa mill costing \$40,000 is to be erected at Douglas, Wyo., for the Western Alfalfa Milling Company of Denver, Colo.

A new building at Dover, Ohio, has been purchased by the Immel Feed & Milling Company which will use it as a warehouse.

A feed store has been opened at Hendersonville, N. C., by L. M. Anders and J. W. Redden, who will operate as Anders & Redden.

A general feed store has been opened at Bryson City, N. C., for the DeHart Feed Company, composed of A. J. DeHart and D. DeHart.

A feed and flour business has been opened at Crane, Mo., by the Majestic Products & Supply Company. C. F. Woodson is manager.

F. J. Young has purchased the feed mill of Chas. E. Perry at Alden, N. Y. Mr. Perry also conducts a feed selling business at Buffalo.

A new feed mill and additional equipment has been installed in the elevator of the Farmers Grain & Milling Company of Hazelton, Idaho.

A feed business is to be conducted at Lockesburg, Ark., by Shannon & Johnson. They have purchased a building there in which they will operate.

The Majestic Products & Supply Company of Crane, Mo., is under the management of C. F. Woodson. The company handles feed and flour.

The Kansas City, Mo., offices of the W. A. Ferson Hay Company is now located at 226 Board of Trade Annex. They were formerly located at 511 Reliance Building.

A screening department has been added to the hay and feed business of the Hogan Bros. of Kansas City, Mo. The department is under the management of Edw. Hogan.

Geo. Read and S. M. Aycock have organized a new company of Lagrange, Ga., to operate as the City Feed & Grain Company. The company will handle stock feed, groceries, etc.

A feed and flour department has been established by M. Washbush of Fond du Lac, Wis. A fireproof addition, 15x40 feet, is being erected; it will have capacity of three carloads of flour.

The Royal Feed & Milling Company of Meridian, Miss., has completed electrifying its plant. The company also operates plants at Memphis, Tenn., New Orleans, La., and Jackson, Miss.

Henry Kenny of Minneapolis, Minn., and Chas. Durst of Dayton, Ohio, have organized the Durst Kenny Company and will conduct a brokerage business in feed and flour at Dayton, Ohio.

A group of farmers and K. O. Smith have purchased the retail feed business of K. O. Smith & Co., of Deposit, N. Y. They will operate as the Deposit Mills, Inc. Mr. Smith will be manager.

P. McGarty has purchased the feed, flour and supply business which he and James Allaby have been conducting as a partnership at Mauston, Wis. The existing partnership has been dissolved.

Operations have been started by the Glendale Hay Company of Glendale, Ariz., in the building formerly occupied by the Phoenix Flour Mills. The business will be under the management of F. H. Gates.

J. W. Hunt, W. M. Maer and J. H. Nixon have incorporated at Wichita Falls, Texas, as the Morgan

Feed & Fuel Company. The firm will handle feed and fuel. The capital stock of the organization is \$30,000.

Fred B. King, Fred Nelson, Walter J. Mapes and C. B. Castle have been named directors of the recently organized Deansboro Feed & Lumber Company of Utica, N. Y.

The Canadian Feed Manufacturing Company, Ltd., of Ft. William, Ont., has been taken over by Davidson & Smith, a Fort William grain company. They will operate as the Davidson & Smith Mill with Geo. G. Riegger as manager.

J. M. Frame & Co., was recently organized at Charleston, W. Va., by J. M. Frame and others interested with him in Frame Bros. & Co. The company will handle feed and flour and is a distinct organization from Frame Bros. & Co.

"CHICAGO ALMOST BARE OF HAY"

Albert Miller & Co., of Chicago, say February 12: "Chicago is almost bare of hay, not a single car of hay arrived here today on C. & N. W. or C. M. & St. P. railroads, consequently no hay offered on the North Side. On West Side there were 14 cars. By all means get a few cars enroute here as soon as possible. Some is bound to strike a satisfactory market."

NEW FEED BRANDS

"MEAT MASH MAKES 'EM LAY" poultry food. The Brooks Company, Fort Scott, Kan. Filed October 14, 1920. Serial No. 138,276. Published and registered December 28, 1920. See cut.

"HO-CO" stock feed. Barrett, Denton & Lynn Company, Dalton, Ga. Filed March 25, 1920. Serial No. 130,155. Published January 4, 1921. See cut.

"GREEN TOP" feed for horses, mules, hogs, poultry and dairy cattle. John M. Wilson, Meridian,



Miss. Filed September 18, 1920. Serial No. 137,347. Published January 11, 1921. See cut.

"MERIDIAN" feed for horses, mules, hogs, poultry and dairy cattle. John M. Wilson, Meridian, Miss. Filed September 18, 1920. Serial No. 137,346. Published January 11, 1921. See cut.

"PURITY" scratch feed, horse feed, poultry mash, pigeon feed, hog feed, chick feed, dairy feed and stock feed. Purity Oats Company, Keokuk and Davenport, Iowa. Filed July 7, 1920. Serial No. 134,659. Published January 11, 1921. See cut.

"MACX COTOLAS MEAL." MacX Feed Milling Company, Clinton, Iowa. Filed September 27, 1920. Serial No. 137,671. Published January 18, 1921. See cut.

"MAN-O-WAR" stock feed. Miller-McConnel Grain Company, Kansas City, Mo. Filed October 29, 1920. Serial No. 138,951. Published January 25, 1921. See cut.

"DIAMOND" mixed feed comprising molasses, alfalfa, hay and ground grains. West Side Hay & Grain Company, Evansville, Ind., assignors to John K. Jennings (doing business as Diamond Mills), Evansville, Ind. Filed June 2, 1917. Serial No. 104,237. Published February 1, 1921. See cut.

"NUN BETTER" feed for horses, mules, hogs, poultry and dairy cattle. John M. Wilson, Meridian, Miss. Filed September 25, 1920. Serial No. 137,648. Published February 1, 1921. See cut.

MIXED FEED TRANSIT AT KANSAS CITY

An order requiring the Burlington and the Kansas City Southern to establish transit at Kansas City on or before April 4 on mixed feed containing more than 20 per cent of molasses has been made in No. 11506, *Atlas Cereal Company vs C. B. & Q. et al.*, opinion No. 6550, 59 I. C. C. 702-4. The Commission in a report made by Mr. Woolley held that the tariff rules of the two carriers mentioned denying transit on mixed feed containing more than 20 per cent of molasses were unreasonable and unduly prejudicial because they permitted transit on mixed feed having 20 per cent or more of molasses, at St.

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CARLISLE COMMISSION COMPANY

736 Live Stock Exchange Kansas City, Mo.

Joseph, Mo., under like circumstances and conditions. The Kansas City Southern was not represented at the hearing. In its behalf it was stated on the record that it intended to allow transit at Kansas City. The order, however, to establish transit was made to run against that carrier, because on the record it was also discriminating.

A MORNING AT THE CINCINNATI PLUGGING TRACKS

Our illustration shows the hay plugging tracks at Cincinnati, Ohio, on the morning of January 18. The receipts of hay that morning were 39 cars, mostly from Indiana, Ohio and Michigan. The following morning, the nineteenth, receipts were 63 cars. Leading hay men of the Cincinnati hay trade



AN AVENUE AT THE HAY PLUGGING TRACKS

are seen and as the air was a wee bit nipping, y' know, trade was going along lively and sales cleaned up rapidly.

The plugging system at Cincinnati has grown more popular among dealers as time has passed. The Cincinnati Grain and Hay Exchange leases the tracks from the railroad. They are located at the foot of Vine Street, adjoining the river and comprise four tracks running about four blocks in length. There are also two hold tracks for use if bill of lading has not arrived and the car is unsold. About 12 employes are needed to do the plugging and the railroad keeps an agent at the tracks who

that no shipments could be made beyond a restricted radius.

The situation was desperate. On the one hand shippers would not sell for they could not realize baling cost in many instances, to say nothing of growing and cutting costs. Consumers would not buy from distant points as the freight cost brought the hay to a higher level than it was worth. A reduced freight rate would return a fair amount to the producer and extend the consuming market so that a greater degree of stability would be obtained.

The hay dealers pointed out that hay rates had passed the point of diminishing returns for the railroads and cited the surplus of 301,997 cars on January 23. Attention was also called to the fact that hay movement stimulates the movement of milk and other products.

Those who took a prominent part in the discussion were R. M. White, of Duluth, president of the National Hay Association; J. Vining Taylor, secretary; D. S. Sims, traffic manager, of Auburn, N. Y.; H. G. Morgan, of Pittsburgh; J. H. Devlin, of Albert Miller & Co., Chicago; B. J. Drummond of Cincinnati; W. A. Cutler, of Adrian, Mich.; and H. G. Pollock of Middlepoint, Ohio.

DEATH CALLS SAMUEL WALTON

An honored career and an unusually long and close association with the hay and grain interests of Pittsburgh, Pa., were the salient facts in the life of Samuel Walton which closed with the ending of last year. Mr. Walton was 60 years of age and death came following a four day's illness from pneumonia. He had made his home at Bellevue for 35 years.

Mr. Walton was a life long resident of Pittsburgh and his association with the hay and grain business began in 1888 when he established the wholesale grain and hay house with which he was prominently identified until his death. In 1907, when the company of which he was a member became incorporated he became president. He was chosen president of Pittsburgh Grain & Hay Exchange in 1913 and was honored by election to the presidency of the National Hay Association in 1918. During this time Mr. Walton did very effective service for his country by his working with George S. Bridge, head of the forage branch of the army. His work was recognized by Herbert Hoover and as a result



A MORNING AT THE CINCINNATI HAY PLUGGING TRACKS

has his own office. From 12,000 to 15,000 cars of hay are sold every year at the tracks.

The most conservative and largest shippers in the Central West are now said to be using the Cincinnati market and it is also largely used by Chicago, Kansas City and St. Louis dealers to fill orders for Eastern and Southern trade. The benefits derived from the "plugging" system are very great and the Cincinnati Grain and Hay Exchange is contemplating an extensive advertising campaign to acquaint consumers throughout the South and Southeast with the advantages of buying hay in the Cincinnati market through the plugging system.

HELP FOR HAY

Producers and dealers in hay have been effectually knocked out by the increase in rates which were put into effect last fall. The 40 per cent increase in Eastern territory and 25 and 35 per cent respectively in southern and western, have disrupted the trade from its accustomed channels and in large measure have destroyed it entirely. On February 4 the Central Freight Association Freight Traffic Committee met a representative group of hay dealers at Chicago and heard the request for a reduction in hay rates to the level established before the last advance went into effect. The dealers stated the hay business had become localized and

he was appointed to the Advisory Board of the Food Administration.

Mr. Walton was very active in Masonic circles being a member of Travered Commandery, St. John's Lodge and Syria Temple. He was also a member of the Pittsburgh Chamber of Commerce, The American Club, The Lambskin Club of Bellevue and a member of the Bellevue United Presbyterian Church. Besides his widow he leaves three sons, Jos. T. J., Samuel W., and William L. Walton; a brother William L. Walton and two grandchildren, Samuel S. and Wilbur R. Walton.

Over a hundred of his associates in the hay and grain industry closed their places of business and attended his funeral and many beautiful floral tributes were gifts of his friends.

THE ST. LOUIS HAY MARKET

BY C. M. BASKETT

Receipts of hay during the past week have been exceedingly light. Very little Timothy and Clover Mixed were offered, receipts being mainly of Alfalfa. The Timothy market is strong and higher on the better grades, which are in excellent local request. The late accumulation is well cleaned up, and there is no desirable hay on the market. The shipping demand is also showing some improvement; in fact, the general conditions are much

better. It is advisable to make liberal consignments at the present time, as it seems certain that lower prices will rule later on.

Light Clover Mixed hay is steady, offerings light and demand excellent, heavy Clover Mixed is in scant offering, and fair local request for the better grades, with off-grades quiet. Pure Clover hay is steady, receipts are very light and there is an excellent local demand for high-grade pure Clover hay. Off-grades are dull.

The Alfalfa market continues to rule firm, with an active local demand for the better grades. Choice leafy hay suitable for dairy trade is commanding premium prices. There is also a good shipping demand for the medium grades. Here, also, it is advisable to ship promptly, as the demand is such that it will readily take care of the offerings. The Prairie hay market is quiet. There is a fair local demand for good No. 1 Prairie, but the lower grades are dull. The trade is well filled up, and the outlet is small.

KANSAS CITY HAY CONDITIONS

BY B. S. BROWN

Despite moderate receipts the tone of the hay market the past week has been barely steady. Alfalfa has declined \$1 and \$2 a ton and most grades of Prairie have lost \$1. Midland Prairie and Lowland Prairie excepted. Timothy and Clover generally have been steady. Arrivals included a fair proportion of low-grade hay for which demand was limited. The better grades continued to find a ready outlet. Receipts in January totaled 3,137 cars, compared with 7,022 cars a year ago when the high record for January in any year was made, and a 10-year average of 3,650 cars.

Pastures in practically all parts of the territory that draw upon Kansas City for supplies continue unusually abundant for this season of the year and inquiry consequently is still somewhat smaller than is expected from dairies and feeders. Shippers and retailers have been the main buyers at Kansas City. Cars continue plentiful and in most sections are more than adequate for requirements, due to the fact that high freight rates are preventing shipments to terminal markets. At the present level of prices many of the lower grades cannot be profitably shipped to the more distant markets. As Kansas City draws from a large territory, this handicap is especially felt and accounts chiefly for the small January movement. Reports to dealers say much hay is still held on farms in this territory which cannot be shipped on account of high freight rates.

NEW YORK HAY MARKET DULL—PRICES LOWER

BY C. K. TRAFTON

In a broad and general sense conditions in the hay trade were extremely unsatisfactory to all concerned during the past month. It is of course possible that a few buyers were slightly gratified by the reduction in cost, but aside from this, it was plainly evident that the members of the trade in general were greatly dissatisfied.

It was patent that this dissatisfaction was chiefly

Transit Leaks

are unknown to the grain shippers who use

KENNEDY Car Liners

Enormous Increased Sales prove the Efficiency, Merit and Serviceability of these liners.

The Kennedy Car Liner

is the only device offered the grain shipper that makes a car Leak-Proof. Cheap—Modern—Profitable. Write now for particulars.

THE KENNEDY CAR LINER & BAG CO.
Shelbyville, Indiana, U. S. A.

Steel Roofing and Siding

For instance: 28-ga., 2½-in. corrugated, galvanized, \$6.25 100 sq. ft.—26-ga. \$6.90, F. O. B., Ohio mills. Can supply lengths specially adapted for GRAIN ELEVATOR siding. Write us. Special prices on all farm equipment. Direct factory representatives and distributors.

Producers Supply & Sales Co.
130 North Wells St., Chicago

traceable to the surprising stagnation. In the judgment of practically all keen observers such sluggishness was rarely if ever seen at this season. It was at the outset, easy to perceive that many if not all dealers were much perplexed by the appreciable falling off in the demand. Under ordinary circumstances, business is usually fairly active after the turn of the year, and therefore this dullness was difficult to comprehend, especially at the beginning. However, it finally became realized that the limited inquiry from distributors and local dealers was chiefly caused by the great falling off in business generally in all lines. There has in short, been such a pause in trade as to cut down transportation fully 50 per cent or more, which means manifestly that trucking business has been almost at a standstill. Consequently, a great majority of horses have been more or less idle, and as a natural result, they required less feeding. This was of course, particularly true of oats and also of manufactured feed. Naturally, if a horse is in stall virtually all day, he requires almost no oats and possibly less hay, etc. In spite of the facts described, the downward tendency has been somewhat surprising to some members of the trade, who had expected practically no more weakness on account of the fact that receipts had been just as light as the demand. In a word it was supposed that the one would offset the other. Consequently it was necessary to look further for additional light on the subject. It finally

became clear that at least part of the decline was in sympathy with the general depression on virtually all sides, prices for nearly all commodities being down to about the lowest level since pre-war times, and it is worthy of note at this juncture that prices were about as low as before the war.

Toward the end of the month, there was a pause in the downward tendency although there was, it must be admitted, no positive rally. Still, there are sagacious dealers who look for rather more steadiness hereafter. Indeed some of them are inclined to the opinion that there may be a firmer falling, ere long. This opinion is based on the assumption that farmers and country shippers will continue to sell sparingly at the lower bids. Furthermore, they seem convinced that because of the extremely light receipts recently, stocks in the hands of small dealers and consumers have been reduced to a low plane which will compel buyers to display far more interest before long. It was claimed in some quarters late in the month that the weakness in hay as well as grain was partly brought about by the failure of an important firm in the Boston trade.

Conditions in the straw market were decidedly similar to those in hay. Buyers continued to show limited interest owing partly to the comparatively mild weather. While there was a weaker undertone there was no striking depression as receipts have been light.

(Hay, Straw and Feed continued on Page 656)

FIELD SEEDS

MINNESOTA SEED SHOW

On February 23, the seventeenth annual seed show of the Minnesota Crop Improvement Association will open in St. Paul, and will continue for three days. Minnesota farmers, both members and non-members of the Association, are sending in samples of pure bred, home grown seeds, for entrance in contests for the various prizes. Among the speakers who have been secured to address the meetings, are W. H. Olin, an agricultural specialist from Colorado, and J. W. Nicholson, secretary of the Michigan Crop Improvement Association.

SEED SITUATION AT TOLEDO

BY C. O. BARNHOUSE

While there has been no fireworks to speak of in the seed trade at Toledo during the last month, the market has been active. The movement of Red Clover has been about equal to the average for the last three years, but that of Alsike and Timothy has been lighter. Prices of all seeds have registered a considerable decline. Clover dropped from \$13.40 to \$10.75, Alsike from \$16.50 to \$15.50 and Timothy from \$3.45 to \$3. Receipts have been: Clover 8,570 bags, Alsike 750, and Timothy 2,170; shipments: Clover 8,880 bags, Alsike 1,700, and Timothy 2,750. F. W. Jaeger of J. F. Zahm & Co., K. D. Keilholtz of Southworth & Co., and Chas. S. Burge of The S. W. Flower Company represented the Toledo seed market at the American Seed Trade convention at Chicago.

SEEDS AT MILWAUKEE

BY C. O. SKINROD

The seed market is still in a partial deadlock, according to the leaders in the Milwaukee seed trade. The farmers are still inclined to hold their seeds, but the trade generally holds that when the waiting game is found a losing one the farmers will sell, just as grain farmers have finally been compelled to sell after holding their products for many months and taking heavier and heavier losses. One seedsman pointed out that in one class of seeds, for instance, farmers have actually had a loss of 50 per cent just by holding for a few weeks more.

Better times are coming, however, is the verdict of Milwaukee seedsmen, who declare that the holding policy cannot last forever. It is believed by some that trade will open up in volume in the latter part of February. Others say the expansion is not likely to come until March, or a little bit later.

The Courteen Seed Company finds that the present seed trade is practically stagnant, but a good improvement is looked for by the last of February. The company holds the opinion that seed trade conditions will improve greatly in the month of March and that the business should be going full tilt perhaps by April, at least in some of its branches.

Just a slight improvement in trade is noted by the North American Seed Company, but for the most part it finds that the farmers are holding on tight and that the deadlock between buyers and sellers is still mostly unbroken. Those who are selling their seeds, the company finds, are very largely those who are hard pressed for money. It is believed that the farmers who have shown the disposition to hold are going to continue to hold

just as long as possible and that an increase in prices may be required to start the movement of seeds in volume. Great activity, however, is looked for after February 15.

The North American Seed Company quotes \$18 to \$19 for Red Clover, \$30 to \$40 for White Clover, \$18 to \$24 for Alsike, Timothy at \$7, Alfalfa at \$18 to \$20, with Montana at \$23 to \$25 and Kansas and Nebraska at \$18 to \$20.

The Kellogg Company reports that business in seeds is light at the present time, but that considerable improvement is likely to take place in the trade by February 15 or possibly not until March 1. The company finds that the farmers are letting go

of their seed holdings more freely than they were some weeks ago, but trade is still far under the normal movement for February.

The L. Teweles Seed Company reports that the seed market is weaker and that the farmers are still holding to their seeds for the most part. The company believes however that since the planting season will be on soon in the South and the Southwest, it is likely that something will have to be done in the way of seed distribution. Within 30 days it is pointed out that seeding will take place in the South and the seeds will have to be shipped to meet this demand. Eventually seeds will have to move, the Teweles company holds, just as grain was held too long by the farmers and finally sold, much of it representing heavy losses. Seeds will duplicate the grain history, the company asserts. A good trade is looked for once it starts the company believes, because sales have been held back for such a long time.

A great rush in the seed business is looked for by the Milwaukee Seed Company with the progress of the spring season. This active sale, it is believed, will start on a smaller scale in February and will gather increasing momentum during March and April. The prices quoted by the Milwaukee Seed Company are \$16 to \$19 paid for Red Clover, \$18 to \$20 paid for Alsike, and \$5.50 to \$6.75, ruling rates for Timothy.

The Courteen Seed Company suffered a loss of about \$5,000 to its building in the great fire of the Donahue Stratton Company, which destroyed a 1,000,000-bushel elevator and about 200,000 bushels of grain. The Courteen Seed Company has its big building more than 1,000 feet away from the elevator but so great was the heat that the building was ignited and the loss was \$5,000. Stock of seeds was not damaged in any way and the business of the company goes right on without the slightest interruption. Repairs were completed speedily.

Portage County, Wisconsin, is going in for the raising of soy bean seed. The light, sandy soil of the county is found to be the best possible place for the raising of this crop. At a meeting held at Stevens Point, Wis., the Portage County Soy Bean Association was formed. The officers chosen are: President, William Duke; vice-president, C. E. Bauman; secretary, V. P. Atwell; treasurer, J. W. Dunegan.

Shipments of seeds were much larger than the receipts for the most part in January according to the official figures of the Chamber of Commerce of Milwaukee. Receipts of Clover seed for January were given at 260,412 pounds, while shipments were



About Scales

Ordinarily, a scale is used to determine weights for the time being. Seldom, at a later date, is proof needed of the accuracy of its weights.

Such, however, is not the case with grain shipping scales where it is necessary to have a scale that not only will weigh accurately at the time being but the printed record of its weights must be a true, infallible reproduction of the poise readings of each draft, and made independent of operator and conditions.

Hence, a shipping scale should be a "proofing machine" as well as a weighing machine. The printed weight tickets from a Bird Scale are proof of accurate weights as they show an automatic reproduction of the exact poise readings at each draft. Such a scale will be a paying investment in your elevator.

The Strong-Scott Mfg. Co.,

413 South Third Street,
Minneapolis, Minn.

435,160 pounds. The Timothy seed monthly report shows receipts of 125,130 pounds and shipments in January of 151,669 pounds. Flax seed receipts at Milwaukee in January were 41,450 bushels, while shipments were almost negligible at 530 bushels.

NEW YORK SEED PRICES LOWER

C. K. TRAFTON

There has been less animation in the market for field seeds during the month and contrary to predictions made in some quarters a month ago prices are generally lower now than they were then. Still, present quotations represent a partial recovery from the extreme losses recorded during the early part of January. While a few varieties are quoted about the same as a month ago, the majority show losses ranging from 1/2 cent to 3 cents; the latter on Alfalfa. Clovers lost 1 to 2 cents.

There has been only a fair jobbing demand for Red Clover, mainly of a local character. There has been considerable business in spot seed between various wholesalers as few of them had any stocks of importance. Arrivals from Europe showed material enlargement, the total for the month being about 8,785 bags, against 1,041 bags during the previous month. Still, the total since the season started is smaller than had been expected—less than 10,000 bags—and the final total at the end of the season will probably not be over 15,000 or 18,000 bags, compared with about 65,000 last year. According to well-informed dealers, little or no additional buying for import is being done at present as the dates named for shipment would bring the seed here too late. Some offers, for instance, are for shipment on February 20, which would mean arrival here about the middle of March. This offer was on a basis of 16 cents c. i. f. for fair average quality. Advices from our own growing sections state that the majority of farmers are still holding their seed above buyers' views. Some of them, it is said, are holding off for 23 or 24 cents, and hence the opinion prevails in some quarters that the carry-over will probably be large.

Demand for Timothy has been light and it was evident that previous purchases had been ample to cover all requirements of the majority of eastern jobbers. Nevertheless, prices are only about a half-cent lower for the month. Holders have shown no great anxiety to press domestic sales as foreign inquiry has shown substantial enlargement. The decline in our prices since early December and the recent advance in foreign exchange rates has enabled buyers in northern Europe to make larger purchases here. Exports during the month were 2,476 bags, against 4,485 the previous month.

Alsike has declined about two cents, largely in keeping with the drop in Red Clover. Hence it still maintains its premium of about 6 cents. For that reason demand is decidedly light. Moreover, many dealers will not buy until they see more definite signs of a jobbing demand. At the same time, stocks are small.

Alfalfa prices suffered a sharp set-back after the

stronger tone noted late in December. During January demand was slow, especially for imported seed. While good domestic grades were still quoted at about 22 cents on the spot, imported was 15 to 18 cents. French shippers continued to offer at 18 cents c. i. f. N. Y., and hence importing business was even more difficult than it had been a month ago. Exports for the month were 136 bags.

Dwarf Essex Rape furnished one firm feature. Demand for this variety showed improvement and stocks were found to be inadequate. Hence some holders were inclined to ask 8 cents or over, whereas others quoted the same as a month ago; 7 to 7 1/2 cents.

Imports during the month included 634 bags of Rye Grass, 82 bags of Orchard Grass, and 1,681 bags of Canary seed. The latter arrival from Argentina was promptly absorbed by a prominent local firm which had disposed of all its spot supply.

Among the month's exports 442 bags of Meadow Fescue and 308 bags of Redtop.

It recently came to light that at a meeting lately of the Nungesser-Dickinson Seed Company of New York City, the following officers were elected: President Marshal H. Duryea; vice-president and treasurer, William A. Proescholdt; secretary, George Nungesser.

S. J. Carruthers, formerly associated with the I. L. Radwaner Seed Company, New York City, is now connected with R. S. Elliott & Co., brokers in grass and field seeds.

J. C. Vaughan, president of the Vaughan Seed Stores of New York and Chicago, spent a short time recently in this city, having made a trip to Washington as a representative of the American Seed Trade Association to protest against the proposal to place a high tariff on imported seeds.

The Muskogee Seed Company has purchased the Oklahoma Seed House at Tulsa, Okla.

The store facilities of the Gunn Seed Company operating at Lincoln, Neb., have been improved.

The Mangelsdorf Seed Company of Atchison, Kan., recently increased its capital to \$750,000, fully paid.

H. Mellpy is now in charge of the retail department of Geo. Keith & Son, Ltd., seed merchants of Toronto, Ont.

D. P. Durban is now with the Hudmon Seed Company of Nashville, Tenn. He was formerly with the Alabama Seed Company of Florence, Ala.

A building in Dallas, Texas, has been leased by the Wehrli Jones Seed Company. The seed firm has equipped it with modern facilities for conducting a seed and poultry supply business and started operations in it on February 2.

Capitalized at \$850,000, the J. Bolgiano Seed Company was incorporated at Baltimore, Md., to grow, buy, sell and deal in field, flower, garden and other seeds. Wm. H. Mihm, Morris B. Robinson and Albert F. Seim are the incorporators.

The Agricultural Seed Company has been organized with offices at 104 Merchants Exchange Building, St. Louis, Mo., by A. W. Schisler. Mr. Schisler was formerly with the A. W. Schisler Seed Company,

but has severed his connections with that firm. The new seed firm will handle field seeds in particular.

The Cincinnati Seed Company has been incorporated at Cincinnati, Ohio, capitalized at \$50,000. D. R. Van Atta, Robt. R. Strong and others are interested.

The business of the Ozark Nursery & Seed Company, formerly of Nashville, Tenn., has been moved to Little Rock, Ark. The company has opened up a wholesale seed department.

To conduct a general retail business in field and flower seeds, poultry supplies, etc., the Rocky Mountain Seed Company has been incorporated at Denver, Colo. W. T. Whitehead is manager.

Capitalized at \$100,000, the Thayer-Thomas Company has been incorporated at Baltimore, Md., to handle seeds. Fred H. Thayer, J. A. Wade Thomas and Wm. I. Norris are the incorporators.

Seeds are to be handled by the Farmers Elevator Company of Hamburg, Iowa. The company has constructed a storage house and has leased additional quarters for picking and sorting purposes.

NEW SEED TRADEMARKS

The following new seed trademarks have been published in recent numbers of the *Official Gazette* of the U. S. Patent Office: "Big Krop" field and garden seeds. J. Bolgiano & Son, Baltimore, Md. Filed September 29, 1920. Serial No. 137,723. Pub-



lished and registered January 4. "Crop-Test" seeds, shrubs, plants, trees. William B. Rosevear, Jr., Detroit, Mich. Filed July 21, 1920. Serial No. 135,251. "Seaboard Brand" field, clover and grain seeds. Milwaukee Seed Company, Milwaukee, Wis. Filed October 15, 1920. Serial No. 138,329. See cut.

THE C. S. BRENT SEED CO.

Wholesale seeds and grain
LEXINGTON, KY.

The Mangelsdorf Seed Co.

Sweet Clover, Alfalfa,
Soudan Grass, Millet, Rape.

ATCHISON

KANSAS

Exporters.

Importers.

NUNGESSER-DICKINSON SEED
COMPANY

NEW YORK, N. Y.

Headquarters for
Imported Clover and Alfalfa Seeds

SEEDS

Grain, Clover and Grass Seeds

CHAS. E. PRUNTY

7, 9 and 11 South Main St. SAINT LOUIS

WHITNEY-ECKSTEIN SEED CO.

Wholesale Seed Merchants

Correspondence Invited

BUFFALO, N. Y.

SEED

We buy and
sell all varieties
of grass and
field seeds

The Albert Dickinson Co.
MINNEAPOLIS CHICAGO

Grain and Seeds

CLOVER SEED FOR SALE

Good clean, white blossom sweet clover seed, \$10
per bushel f. o. b. Gibbon. ROSCOE LUNGER,
Gibbon, Neb.

North American Seed Co.

Wholesale Grass and Field Seeds

Milwaukee, Wis.

"THE HOUSE OF QUALITY"

SEEDS

Grain, Clover and Grass Seeds

CHAS. E. PRUNTY

7, 9 and 11 South Main St. SAINT LOUIS

WHITNEY-ECKSTEIN SEED CO.

Wholesale Seed Merchants

Correspondence Invited

BUFFALO, N. Y.

For Sale

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

MACHINERY**FOR SALE VERY CHEAP**

A 100-ton 50-foot Fairbanks Railroad Track Scale, with all steel for setting same. All in perfect condition. C. E. BIRD & CO., Minneapolis, Minn.

FOR SALE

One motor, used a short time, fine condition; 15 horsepower, 60 cycle, 1,250 r.p.m., single phase, 220 volts, \$250. Wire quickly before we move it. JESSE J. CULP, Warrensburg, Mo.

OIL ENGINES FOR SALE

60-horsepower Fairbanks-Morse.
50-horsepower Otto.
25-horsepower Fairbanks-Morse.
50 other sizes.

A. H. McDONALD, 550 W. Monroe St., Chicago, Ill.

FOR SALE

Two 4-valve Corliss Engines: one right-hand, 250-horsepower, size 20x42; other, left-hand, 150-horsepower, size 18x40. Both travel rate 75 r.p.m. Also 120 feet 40-inch double leather belt; two 39-foot Howe Platform R. R. Track Scales. Write for further information. LADISH MILLING COMPANY, Milwaukee, Wis.

NEW AND USED ELECTRIC MOTORS BOUGHT AND SOLD

For Sale: 25 $\frac{1}{4}$ horsepower, 110 volt, 60 cycle, single phase new motors, factory guaranteed, at \$25 each. Bargains in other sizes. Terms—25 per cent with order, balance C. O. D. We pay spot cash for motors. Send description and price to prevent delay. GENERAL DISTRIBUTING COMPANY, Dept. A.M., Duluth, Minn.

MACHINES FOR SALE

Sprout Waldron make:—One Monarch 6 section by 10 self-balancing, ball-bearing swing sifter, Style E.

One No. 2 Monarch receiving separator with extra screens for corn and oats.

One Monarch, 9 by 24, 3-high roller mill (almost new).

One No. 2 Monarch dust collector.

All machinery has been used very little and in good shape. Reason for selling, we are increasing capacity. MANASSAS FEED & MILLING CO., Manassas, Va.

ELEVATORS AND MILLS**WANT**

Elevator at good grain point in central Illinois for North Dakota land. ILLINOIS, Box 1, care "American Elevator and Grain Trade," Chicago, Ill.

WANTED

To hear from owner having elevator, mill or other property for sale. Give cash price and particulars. JOHN J. BLACK, Chippewa Falls, Wis.

FOR SALE

Rolled oats factory in eastern Iowa. Capacity 40,000 lbs. per day. Plant in good shape and ready to run. For particulars, address C. P. EVANS, 928 E. Iowa Ave., Iowa City, Iowa.

MINNESOTA ELEVATOR FOR SALE

Capacity 200,000 bushels. Steam and electric power. In good condition. Excellent distributing point, transit privileges, on direct line from Minneapolis and St. Paul, five railroads; repair shops insure plenty of cars. Can be bought for less than 50 per cent of what material would cost today. MINNESOTA, Box 10, care "American Elevator and Grain Trade," Chicago, Ill.

BAGS**FOR SALE**


Three thousand second-hand cotton grain bags, 16-oz., 20 cents each, f. o. b. St. Louis, in large or small lots. FOELL & COMPANY, 123 Market Street, St. Louis, Mo.

FOR SALE—BURLAP BAGS OF EVERY KIND

New or second-hand, plain or printed with your brand; seamless cotton grain bags; sample bags; burlap, cotton, sheeting, or paper for car lining, etc.

Wanted: Second-hand bags; best prices paid. WILLIAM ROSS & CO., 409 N. Peoria St., Chicago, Ill.

GIBBS' PATENT DUST PROTECTOR
is invaluable to operatives in every industry where dust is trouble some, affording perfect protection with perfect ventilation. Thoroughly tested for many years in every kind of dust. Nickel-plated protector \$1.25. Canada \$1.50. post paid. Circulars free.



GIBBS RESPIRATOR CO. "B"
284 Lake St. River Forest, Ill.

ROPP'S CALCULATOR—Invaluable for Grain Dealers. Tables show at a glance the value of wheat, corn, rye, oats, barley, seeds, etc., at all market prices per bushel. Trade discounts, stock tables, capacity tables, short-cut arithmetic. Solves all grain problems with lightning rapidity. Price \$1.50.

Miscellaneous Notices

[Copy for notices under this head should reach us by the 12th of the month to insure insertion in the issue for that month.]

PRAIRIE HAY

For sale, any grade, any quantity; also some sound brown alfalfa. Wire for quotations. D. M. BACHMAN, Iola, Kan.

WANTED, TO BUY

Second-hand copy of Taylor's "History of the Board of Trade." Will pay \$10. PROF. J. E. BOYLE, Cornell University, Ithaca, N. Y.

FLOUR AND MILL FEEDS

Mixed cars of flour and mill feeds in 100-pound sacks are our specialties. Would like to send you a trial order to convince you of the superiority of our products. ANSTED & BURK CO., Springfield, Ohio.

ADDRESSING MACHINES

Multigraphs, Multicolor Presses, Letter Folders, Dictating Machines, Typewriters, Duplicators, Dictaphones. Bought, sold, rebuilt. Buy a rebuilt guaranteed machine and save half. PRUITT COMPANY, 112-L North La Salle St., Chicago, Ill.

RAILROAD CLAIMS COLLECTED

WE COLLECT RAILROAD CLAIMS covering loss or damage to grain, flour and mill products. Do not overlook delay, shortage, decline in market and deterioration claims. We have an extensive organization for handling these matters. References: Any Minneapolis bank or the *Northwestern Miller*. We are members of the Grain Dealers National Association and the Traffic Club of Minneapolis. This service is furnished on a percentage basis. No collection, no pay.

THE SECURITY ADJUSTMENT COMPANY,
1132-1156 Builders Exchange Bldg.,
Minneapolis, Minn.

SITUATION WANTED**POSITION WANTED**

Position as manager in farmers' elevator or any other; good experience. Can start at once. JOS. A. MELMER, Danc, S. Dak.

SCALES REPAIRED AND SOLD

50 wagon scales, capacity from 4 to 15 ton. Any size platform in following makes: Fairbanks, Howe, Buffalo, Standard and Columbia. Each scale that leaves our factory is thoroughly overhauled and tested and guaranteed to be correct. We furnish competent men for outside work.

COLUMBIA SCALE CO.
2439 N. Crawford Ave. CHICAGO, ILL.

For Sale at a Bargain

Three Allis Chalmers Double Roller Mills, 9x24 inches.

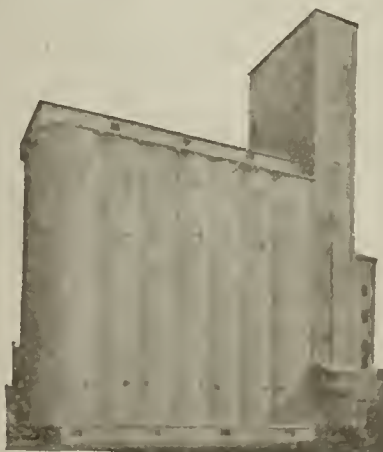
Three Barnard & Leas Double Roller Mills, 9x30 inches.

PRACTICALLY NEW

Also complete corn mill equipment—dryers, Plansifters, aspirators, reels, conveyors, scourers, dust collectors, elevators, etc.

Immediate Shipment

MEAD JOHNSON & CO.
EVANSVILLE, IND.

**KENTUCKY ELEVATOR
For Sale**

New, up-to-date concrete grain elevator. Capacity 275,000 bushels. Has elevating capacity of 75,000 per day. Ellis Drier of latest design, attached, 7,500 bushels 10 hour capacity. Located in milling district. Has free switching privilege in and out; owns its own tracks and has storage facilities for 100 cars. Bins are 94 feet high; workhouse 170 feet high.

This is one of the best private elevators in the U. S. Will sell outright or will lease to responsible parties. Will consider taking interest with party leasing, but would be unable to be active in business account of other interests. Further information can be had by addressing

W. A. Thomson Mill & Elevator Co.
LOUISVILLE, KY.

Hay, Straw and Feed

(Continued from Page 653)

OMAHA HAY EXCHANGE PROTESTS

The Omaha Hay Exchange, through Secretary J. C. Pederson, has issued a letter to hay dealers in that section, protesting against the action of the Agricultural Department of the Union Pacific System in issuing bulletins containing lists of shippers in its territory who have hay to market. Mr. Pederson's letter says, in part:

"The object of this letter is to invite you to immediately register your disapproval and protest against the activity of a Railroad System in specializing on the marketing of hay or Alfalfa in competition to the regular channels of distribution. We are of the opinion that the railroads have a sufficient duty to perform if they will supply us with adequate transportation service, and it is quite unnecessary for them to go in competition to the regularly established hay trade in developing a commercial business of that nature. If you feel so inclined, we trust that you will immediately dispatch a letter of protest on the activity of the Agricultural Department of the Union Pacific, addressing same to H. M. Adams, vice-president, Union Pacific Railroad, Omaha, Neb., utilizing your letterhead for the purpose, and send a copy to the nearest Union Pacific commercial freight agent serving your territory, requesting him to take some immediate action."

PROGRESS TOWARD FEDERAL HAY GRADES

On January 24 the Department of Agriculture issued a bulletin outlining progress to date in the movement for establishing uniform Federal grades for hay. The bulletin says in part:

"The Bureau of Markets of the United States Department of Agriculture has made a comprehensive survey of the hay market situation throughout the country. In connection with this survey, schedules were sent to a list of about 15,000 persons who were interested in some phase of hay marketing. These schedules requested the opinions of the recipients relative to various factors which are of importance in the marketing of hay, including present standards or grades for hay, terminal markets inspection service, Federal hay grades and Federal inspection. The schedules returned indicate a widespread and general dissatisfaction with present hay grades and their general application.

"While there seems to be more dissatisfaction with the application of the grades than with the grades themselves, many shippers and receivers claim that the grades used in the various terminal markets are based only upon the ideas of the dealers in the markets as to what factors should determine the grades and that due regard is not given to factors which are equally important and with which the producer and shipper must deal.

"Of those replying to the questions on the schedules sent out by the Bureau of Markets relative to Federal grades and Federal inspection of hay, 87 per cent favored Federal grades and 84 per cent favored Federal inspection. Federal standards are favored principally because of the fact that their use throughout the country would make for uniformity of grades, and buyers then could know that when a certain grade of hay was quoted from a certain section of the country the same character of hay was being offered as that from other sections when a like grade designation was stated.

"It is also felt that Federal grades would probably be more explanatory than some grades now in use and would describe more accurately the character of the commodity to which the grade was applied. This feeling is no doubt based upon the experiences of the trade with Federal standards for grain and cotton, the uses of which are proving so satisfactory to all agencies interested in the marketing of those commodities.

"The inspection of hay by Federal hay inspectors under the supervision of the United States Depart-

ment of Agriculture is favored because that appears to be the only impartial agency qualified to undertake such an important task. All Federal inspectors would be subject to the same regulations respecting the application of grades and the issuance of grade certificates and will have received the same training in preparation for their work. The law providing for the Federal inspection of hay makes such inspection available to all interested parties, so that shippers and receivers, as well as dealers in terminal markets, may have the protection which such an inspection and certification of grade provides.

"Work on the preparation of Federal standards for hay is progressing rapidly at the hay standardization office located at Alexandria, Va., and the Department will be prepared to establish a hay inspection service at several important hay markets as soon as funds are made available for the work."

PROGRESS IN FEED MANUFACTURING

BY R. W. CHAPIN

(Continued from Page 584, January issue)

In the purchasing of all complex articles, and in fact pretty nearly everything mankind uses, there is only one standard that is used and that is provided by the judgment of the purchaser. He is the court of last resort. His judgment may not be perfect but in practice it is final.

There is no way you can provide labels showing the actual worth of complex things. I do not believe many people buy automobiles because of the long list of their ingredients, namely such and such a bearing, this kind of a carburetor and so on. They buy automobiles on other standards, either on the judgment of their friends, their own, or because of their own experience. In other words they buy solely on results. In this connection I will say that the trademark is a modern standard that identifies the product and maintains its uniformity, and that is the only way you know how to get the same results that you got last time. As long as the manufacturer lives up to the standard previously expressed and identified by his trademark you are his customer.

There have been a great many criticisms made on mixed feeds in the last 10 years; so many I cannot remember them all. In many cases the critics have had to swallow their own words, and I will say in all fairness that in many other cases the criticisms were fair and just. A lawyer cannot stand up and defend every other lawyer as being honest and ethical, but the bulk of them are, as we all know. The majority of men are as honest and as ethical as their education and training allow them to be.

No one thinks of reviling the automobile because some one manufacturer does not know his business, or because he can get away with an inferior article. Sometimes the faults were due to his lack of skill and sometimes due to either his desire to make a low price by skimping, and in some cases due to an attempt to skimp in order to make an excessive profit. These conditions happen in all trades and even in all occupations. Any one can go into the mixed feed business over night, but he must demonstrate his fitness according to the laws of the survival of the fittest.

No one knows how many thousand manufacturers there are of feeds and mixed feeds in the United States. The larger and more progressive ones are nearly all represented here today, but there are thousands of little ones, many of them simply retailers, who are making feeds on a small scale without proper equipment, without proper knowledge of chemical requirements or animal needs, and I believe that here is where much of the trouble comes from.

The American Feed Manufacturers Association cannot represent the whole industry, but it does stand for the best and most ethical members of the industry. The others they can neither control nor educate. The criticisms of mixed feeds are so many that it would take a month to recite and answer them. Some of these criticisms are very frivolous and rather strained, such as the charge

of the use of fanciful names. In every industry products and even cows have fanciful names.

Another charge is the multiplicity of brands. This simply indicates this is a very large country and has many wants and preferences. In other words one man doesn't always want to buy the same brand of article that his neighbor does.

Another charge has been that the formulae of these feeds are not given—thus no one can tell just how to value them, or how much he is getting for his money. After what Dr. Hart and Dr. Jordan have said about attempts to value feeds, I do not think the formula method would be of very much information, even in the hands of experts, because Feed Control Officials of all people know what tremendous variations there are in these products.

I do not think there is any great demand for further information about the inside of a feed bag. What the farmer wants to know is, what will the feed do and what will it cost him to make his milk or meat. He can find this out very quickly with a test, and this is the method he pursues.

Charges have been made that some of these feeds have been called balanced rations that are not. I do not suppose that any feed is a balanced ration but some of them will do the work quite as well as a ration that is theoretically balanced and quite as cheaply.

Most of the better known feeds have been on the market so long that people who buy them know exactly how to use them to get best results, just as the housewife knows how successfully to make bread out of her favorite brand of flour. She certainly doesn't know why one brand of flour is different from another, nor does she care, as this would lead way into the dark realms of higher chemistry.

Of course the chief charge against mixed feeds is that some of them contain roughage or low grade materials. Looking at this purely from a scientific point of view we are forced to admit that everything that is edible should be used provided the cost of it is no more than the value of the article. Oatmeal mill feeds must be used. They are produced in large quantities and represent the equivalent of large amounts of corn and oats in energy values. The fact that roughages add fiber and bulk to a ration is just why they are put there. Very few rations for horses and ruminants are safe without a sufficient amount of bulk or fiber. At least the practical farmers' own practices would lead one to believe this. This is based on experience, not on theory.

Immense quantities of molasses are used in this country because it furnishes a cheap source of energy. Shipping molasses in barrels for farm use is neither practical nor economical because of its objectionable qualities when mixing without proper mechanical appliances. There is only one way to ship molasses in bags and that is to solidify it or dry it by adding it to proper absorbent materials. This calls for the use of oat hulls, oat clippings, alfalfa hay, etc. Molasses can not be used without the carrier, which again I might call an edible barrel, and when the two are mixed together they probably become a concentrate, if you place the standard of concentration somewhere around the level of bran.

Moreover, when the molasses is thus solidified the resultant component is almost invariably fortified with heavy fine materials like protein concentrates and grain products, thus bringing the total concentrates of the mixture up to a fairly respectable level. In other words, roughage is no longer roughage when it is brought up to a grain level any more than oat hulls are roughage as long as they continue in the oat kernel.

The fact remains, however, that these feeds are popular and in sections where they are used seem to give excellent satisfaction. They save or replace large amounts of other concentrates, constitute a distinct addition to our store of food materials, and keep the price of other feeds and grain down to a level where all can afford to feed without paying famine prices.

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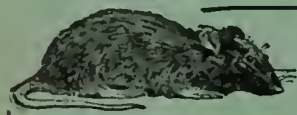
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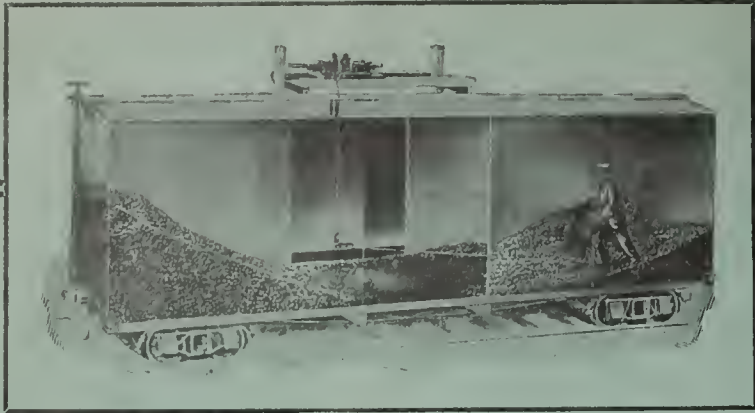
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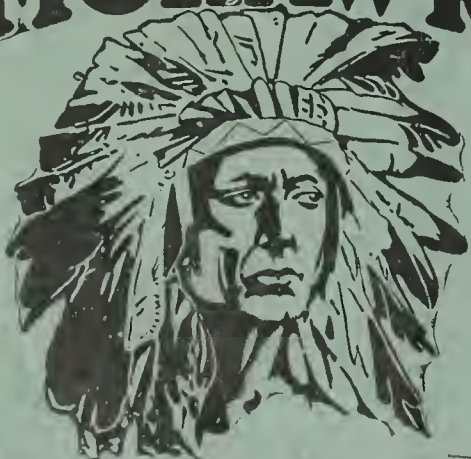
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